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Agriculture



Forest  
Service

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# Environmental Assessment

## *Moab Non-Motorized Trail Designation*

Moab/Monticello Ranger District, Manti-La Sal National Forest  
Grand and San Juan Counties, Utah



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# **Chapter 1. Purpose and Need for Action**

## **1.1 Introduction**

Trails have historically been built and used in the La Sal Mountains for many different reasons. The current system of recreational trails on the Moab Ranger District evolved over time from trails that were historically used to move livestock around for summer pasture, to access mining areas and private lands and for travelling through the mountain range. These trails were built by Native Americans, early homesteaders and miners, the Forest Service, and the CCC.

In 1991, the U.S. Forest Service issued a Travel Map for the Moab and Monticello Ranger Districts of the Manti La-Sal National Forest outlining what roads, trails and areas were open to public motorized and non-motorized use. The Travel Map designated approximately 63.5 miles of trail as open to all non-motorized uses.

In 1993, due to an increase in mountain bike use in the La Sals, the Forest Service enacted a special order that restricted mechanized use (mountain bikes) to designated trails to manage their use and to mitigate potential impacts from the increased use.

As trail use increased the Forest Service began designating additional trails to provide more recreation opportunities. These trails included the Fisher Mesa (authorized in 2001), Moonlight Meadows (authorized in 2003), Hazard County (authorized in 2005) and Upper Porcupine Single-track (UPS) trails (authorized in 2009).

Trail use has continued to increase over the years and, as a result, user groups are requesting additional non-motorized trails in the La Sal Mountains. Therefore, the Forest Service has determined that a system-wide cumulative approach is needed to designate an appropriate, sustainable trail system that meets the needs of current and future trail users in the La Sals.

### **1.1.1 Project Area Description**

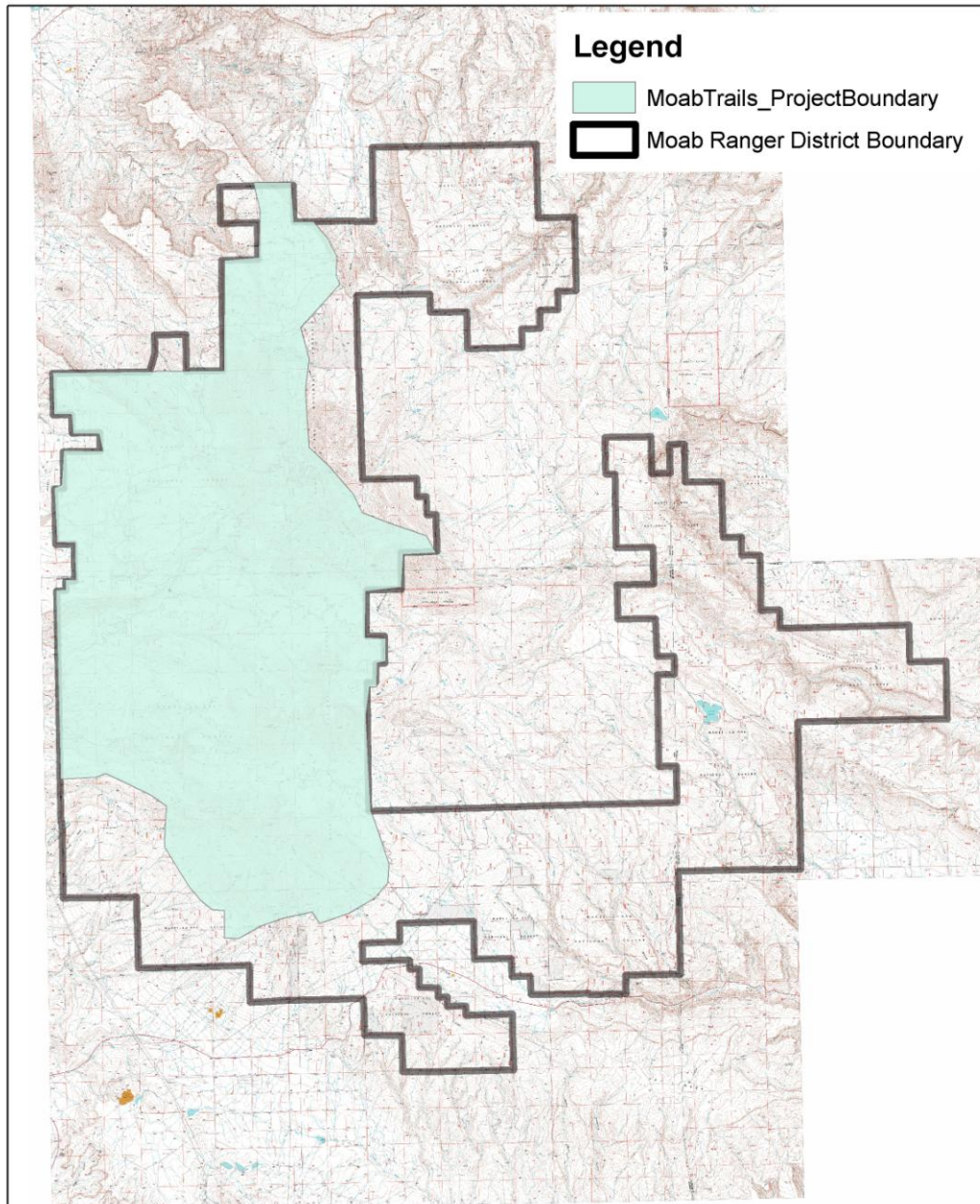
The Project Area includes the Moab Front and the majority of the high country in the La Sal Mountain Range, as well as some of the surrounding foothills. See Map 1 below for specific boundary location.

The bulk of the existing non-motorized trail system on the Moab District is located within the Project Area. The only trails outside of the Project Area are the rarely used trail in Roc Creek in the Colorado portion of the District and the motorized trails in the Two-Mile portion of the District. The Project Area was based on the existing trail system and the proposed trails that the public requested during the early phases of public involvement.



The Project area includes all of the high peaks of the La Sal Mountains, as well as the high passes in between the peaks (La Sal and Geyser Pass) and the lower foot hills that surround the high peaks.

**Project Area Locator Map**



### **1.1.2 Current Condition of System Trails**

At the present time, there are 23 non-motorized trails within the Project Area as shown in Table 1.

Currently all trails in the Project Area are open to all non-motorized uses.

**Table 1. Summary of Existing Trail System**

<b>Current Trails in the Project Area</b>	<b>Mileage (approximate)</b>
Trails open to all non-motorized uses: <ul style="list-style-type: none"><li>- Bachelor Basin Trail #5034- 6.6 miles</li><li>- Boren Mesa Trail #5037 - 5 miles</li><li>- Burro Pass Trail #5315- 2.4 miles</li><li>- Carpenter Basin Trail # 5028 – 3.2 miles</li><li>- Clark Lake Trail #5141 -2.2 miles</li><li>- Clark Lake Loop Trail #5144 -1 mile</li><li>- Fisher Mesa Trail #5180 – 2.1 miles</li><li>- Deep Creek # 5101 – 3.5 miles</li><li>- Hazard County Trail # 5903- 3 miles</li><li>- Mountain View Trail # 5185 - .9 miles</li><li>- Hell Canyon Trail # 5039- 2.1 miles</li><li>- Miners Basin Trail #5040- 3.5 miles</li><li>- Moonlight Meadows Trail #5179- 1.5 miles</li><li>- Squaw Springs Trail #5038- 4.1 miles</li><li>- Pack Creek Trail #5041- 4.1 miles</li><li>- UPS Trail # 5973 – 3 miles</li><li>- South Mountain/Pack Creek # 5075 - .4 miles</li><li>- South Mountain # 5029 – 8.9 miles</li><li>- Doe Canyon # 5100 – 2 miles</li><li>- Pole Canyon # 5035 – 3 miles</li><li>- Warner/Beaver Basin # 5033 – 4.4 miles</li><li>- Warner to Oowah Trail #030- 1 mile</li><li>- 030 to 033 Trail- .25 miles</li></ul>	63.5

## **1.2 Purpose of and Need for Action**

### **1.2.1 Purpose**

Most of the existing authorized non-motorized trail system in the La Sal Mountains was created for uses such as accessing mining areas or moving livestock across the range. While these trails now provide opportunities for recreationists to enjoy the forest most of them were not created with recreational opportunities in mind. The existing trail system is not providing for all the varied non-motorized uses that are now being sought by many forest users.

An increased amount of use and types of trail users has also begun to lead to conflicts and to safety concerns on some of the existing trails. Currently all of the existing system trails are open to all non-motorized users, and sharing the trails between users has worked in most areas. However, conflict is beginning to occur along some of the more heavily used trails. Most of the conflict involves areas with heavy use from down-hill oriented mountain biking and uphill travel by horseback riders and hikers occurring on the same trails. These uses are all legitimate forms of recreation on Forest Service trails but when they occur at the same time and in significant numbers conflicts can occur. The proposed action has been designed to reduce potential conflicts and safety issues by changing the designation of some existing trails and designating new trails that would allow for specific types of users (i.e. foot and horse only). These trail designation changes would create areas where differing types of trail experiences would be available to forest users.

### **1.2.2 Need**

The need for action is based on the following three primary reasons.

1. The existing trails in the La Sal Mountains were not designed with recreational opportunities in mind. Recreational trail use and visitor expectations have changed over the last several decades. The current trail system is not designed to meet the changes in use or expectations. These new desired recreational opportunities include trails designed to create loops, trails accessing peaks and other destinations, trails that allow users to escape the extreme heat found on lower elevation trails during the summer months, trails that designed to specifically offer solitude, trails specifically designed and managed to offer a more social experience, and a range of trails designed for specific skill levels. There is a need to

provide a wider variety of recreational experiences on the non-motorized trail system within the Project Area.

2. Impacts to forest resources are occurring as more recreationists are using the existing trail system and areas not accessed by trails. Some existing trails are not constructed at appropriate grades, or with sufficient water diversion structures or in suitable locations to deal with increased use and are having impacts on soil and riparian resources, in terms of soil erosion and sediment delivery to riparian areas. Some users have created or are using unauthorized “connector” trails to create loops or other trail opportunities. Impacts are also occurring in sensitive areas where unmanaged use is increasing. More recreationists are accessing the alpine zone (including the Mount Peale Research Natural Area) to climb the high peaks which can lead to trampling of sensitive tundra plants and loss of ground cover. Rock climbers are also hiking off trail to access popular crags and canyons which can impact riparian vegetation and lead to a loss of ground cover in these sensitive locations. There is a need to reroute some existing trails to a more sustainable location to allow for a better recreation experience and to reduce their impacts to forest resources. There is also a need to provide a wider variety of recreational experiences on the non-motorized trail system in the Project Area and reduce the perceived need by some users of creating unauthorized trails
3. All of the trails on the existing system are open to all non-motorized uses. The increase in the number and type of trail users has led to user conflicts and safety concerns on some trails. Most of the conflict is associated with the popular trails in the central portion of the La Sals that are served by commercial shuttle companies. These trails receive a large amount of downhill oriented mountain bike use, but are also popular among hikers and equestrians that generally travel in the opposite direction of the mountain bikers. This increase in use on these trails and the different experiences being sought by a variety of users has led to social impacts to users seeking solitude and quiet by those seeking a more social and/or extreme trail experience. While all of these trail uses are legitimate forms of recreation of National Forest System lands, they are not always compatible with each other on heavily used, steep, narrow trails with short sight distances like those found in the La Sals. These situations can also lead to safety concerns when it becomes difficult for uphill trail users (primarily equestrians) to easily avoid large groups of relatively fast moving downhill bike traffic. There is a need to adjust the designated

non-motorized trail system in the Project Area in order to provide areas and trails where users would be able to meet their desired recreation experience and reduce the potential user conflicts, and safety concerns while still allowing for a variety of uses and trail experiences in the La Sals.

## 1.3 Proposed Action

The Proposed Action would include keeping approximately 60 miles of existing authorized non-motorized trails on the system. In addition it would designate new trails, change the use designation of some existing non-motorized trails, place seasonal closures on some trails, and close and reclaim some existing trails that are no longer needed on the trail system. The Proposed Action would also prohibit commercial mountain bike shuttle operations in the La Sal Pass Area to reduce the potential for increased trail conflicts in that portion of the District. A more complete description of the Proposed Action is provided in Chapter 2.

Table 2. contains a summary of the Proposed Action (see Proposed Actions overview map in Appendix A for location of trails)

**Table 2. Summary of Proposed Action**

Action	Mileage (approximate)
Keep existing authorized non-motorized trails on the system	60
Remove existing trails from system ( <i>Deep Creek Trail #5101</i> )	3.5
Change existing designation from non-motorized to “Open to two-wheeled motorized vehicles” ( <i>Carpenter Basin Trail #5028</i> ) with a seasonal restriction on motorized vehicles from Sept 15 <sup>th</sup> –April 15 <sup>th</sup>	3.2
Change designation of system trail from “open to all non-motorized uses” to “open to foot and horse use only on the following system trails: <ul style="list-style-type: none"> <li>• <i>Mountain View Trail # 5185</i></li> <li>• <i>South Mountain/Pack Creek # 5075</i></li> <li>• <i>Portion of South Mountain # 5029</i></li> <li>• <i>Doe Canyon # 5100</i></li> <li>• <i>Pole canyon # 5035</i></li> <li>• <i>Portion of Warner/Beaver Basin # 5033</i></li> </ul>	13.8

<p>Place seasonal closure for bicycles until July 1<sup>st</sup> on the following system trails</p> <ul style="list-style-type: none"> <li>• <i>Portion of Burro Pass Trail # 5315</i></li> <li>• <i>Portion of Moonlight Meadows # 5179</i></li> </ul>	4.2
<p>Add trails to system that are open to hiking use only</p> <ul style="list-style-type: none"> <li>• <i>Mill Creek Overlook Accessible Trail- .1 miles</i></li> <li>• <i>Mill Creek Climbing Access Trails- 1.2 miles</i></li> <li>• <i>Brumley Creek Climbing Access Trail- .7 miles</i></li> <li>• <i>Brumley Arch Trail- .2 miles</i></li> <li>• <i>Mill Creek Alpine Loop- .7 miles</i></li> </ul>	2.9
<p>Add trails to system that are open to hiking and horse use only</p> <ul style="list-style-type: none"> <li>• <i>Laurel Ridge- 1.8 miles</i></li> <li>• <i>Gold Basin- 1.9 miles</i></li> <li>• <i>Manns Peak Trail- 1.1 miles</i></li> <li>• <i>Mt Tuk Trail - 1.6 miles</i></li> <li>• <i>Gold Knob Trail- .6 miles</i></li> </ul>	7
<p>Add trails to system that are open to all non-motorized uses</p> <ul style="list-style-type: none"> <li>• <i>Fisher Mesa Extensions- 1.5 miles</i></li> <li>• <i>Upper Schuman Trail-.3 miles</i></li> <li>• <i>Squaw Springs Exit-1.8 miles new /3.7 miles on road</i></li> <li>• <i>Terraces Trail-.8 miles</i></li> <li>• <i>Burlfriends Trail- 3.5 miles</i></li> <li>• <i>Sheepherders Trail-.6miles</i></li> <li>• <i>Medicine Lake Trail- 1.1miles</i></li> </ul>	13.3 (includes 3.7 miles on existing Forest Service Roads)

## **1.4 Decisions to be Made**

The District Ranger will serve as the responsible official for this project. After considering the environmental effects disclosed in this document, the District Ranger will make the following decisions for non-motorized trail designations in the La Sal Mountains;

- What, if any changes should be made to the existing trails system?
- What types of uses should be allowed on the non-motorized trail system?
- What, if any new non-motorized trails be designated? If so, then where should they be designated?
- What, if any seasonal closures should be put into effect on some of the non-motorized trails?
- What, locations if any is commercial shuttle use appropriate in the La Sals?

## **1.5 Consistency with Laws, Regulations and Policies**

This EA has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA, 40 CFR §§1500-1508, 2008, the National Forest Management Act (36 CFR Part 219, 2008, and the 1986 Manti- La Sal National Forest Land and Resource Management Plan (Forest Plan).

### **1.5.1 Forest Plan Management Areas**

The Proposed Action and Alternatives would occur within the following Forest Plan Management Emphasis Areas

#### **Range**

Emphasis is on production of forage and cover for domestic livestock and wildlife. Other compatible uses occur including dispersed recreation opportunities.

#### **Semi-Primitive Recreation**

Emphasis is on providing recreation opportunities such as hiking, horseback riding, hunting, cross-country skiing, day use and OHV use. Other resource uses occur as long as they are rehabilitated to reflect as closely as possible, previous undisturbed conditions.

#### **Research, Protection and Interpretive Areas**

This includes the Mount Peale Research Natural Area (RNA). Other uses are limited by the need to maintain the values for which that area is established.

#### **General Big Game Winter Range**

These are areas that wildlife traditionally use in the winter. Other uses may occur as long as it does not conflict with or cause unacceptable stress on wildlife, and so long as the activity or its rehabilitation emphasizes habitat maintenance or improvement.

Permanent roads and special uses may be permitted. Motorized use is managed as appropriate to prevent unacceptable stress on big-game animals during the primary use season.

### **Timber**

Management emphasis is on wood –fiber production and harvest. This includes areas with timber stands capable of producing high value wood products. Inclusions of other vegetative types occur that may be managed for other uses. Other uses occur so long as their use and rehabilitation return the area to a condition that is in harmony with the timber emphasis.

### **Watershed Protection/Improvement**

Includes area where watershed treatments have occurred and other resource use is limited to protect the watershed investments. One small area of watershed protection is in the project area on the slopes of South Mountain where contour terracing has occurred. The proposed Terraces trail crosses through the area.

### **Developed Recreation Sites**

Emphasis is on providing developed recreation facilities such as campgrounds, picnic grounds, trailheads, visitor information facilities, summer home areas, ski areas, and water-related support facilities. Facilities such as roads, trails, signs, etc. may dominate this area.

### **Consistency with Forest Plan Management Areas**

The Proposed Action and Alternative 4 would be consistent with the affected Management Emphasis Areas.

The Proposed Action includes the Tuk Trail and Alternative 3 includes both the Tuk Trail and the Top Shelf Trail. Portions of the proposed Top Shelf and the Tuk trails are located within the Research, Protection and Interpretive Management Area, which limits trail construction to trails that are needed for access to conduct research or for educational purposes.

The Tuk trail is primarily being proposed to deal with impacts occurring from hikers climbing into the alpine zone and the Top Shelf trail would be a new biking opportunity in an area that currently sees very little recreation use. Neither of these trails meets the requirements outlined for trail construction in



this emphasis area. However, seeing that the Tuk trail is being proposed to protect the qualities that the management area is trying to protect (i.e. alpine tundra vegetation) it is considered consistent with the Forest Plan Management Area.

The Top Shelf trail would be inconsistent with the Research, Protection and Interpretation Management Area as it is being proposed to provide a new recreation experience in the area and not for protection purposes. Designation the Top Shelf Trail within the Research, Protection and Interpretation Management Area would require a Forest Plan Amendment.

### **1.5.2 Forest Plan Goals, Desired Future Conditions, General Direction and Standards and Guidelines**

The Proposed Action and action alternatives are designed to address the following Forest Plan Goals, Desired Future Conditions, General Direction and Standards and Guidelines and Specific Management Area General Direction and Standards and Guidelines:

#### Forest Plan Goals

##### *Recreation*

- Offer a broad range of dispersed and developed recreation opportunities by providing appropriate recreation experience and setting levels (pg. III-2)

##### *Facilities*

- Manage the transportation system to safely and economically transport people, products, and services to accomplish planned management unit programs and goals (pg. III-5)
- Manage to provide public (user) health and safety (pg.III-5)

##### *Research, Protection and Interpretation Units*

- Manage special interest areas to protect the unique archeological, ecological , geological, paleontological, historical, and other special characteristics for long-term public benefit.
- Preserve in as near as natural condition as possible areas or features of unique natural phenomenon

#### Forest Plan Desired Future Conditions

##### *Dispersed Recreation*

- A range of dispersed recreation opportunities would be provided on National Forest System lands. Each activity would be managed to maintain or enhance appropriate opportunities. (pg. III-9)

#### *Research, Protection and Interpretation Units*

- Research Natural Areas, Botanical Areas, and other Special Interest Areas would be established so future generations will have the opportunity to study or view the notable and/or unique physical, biological, paleontological, cultural, and historical values of the Forest.

#### *Facilities*

- The transportation system would be safe, functional, economical, and environmentally acceptable. (pg. III-14)

#### Forest Wide General Direction and Standard and Guidelines

##### *Dispersed Recreation Management*

- (01) Describe, as appropriate, high interest or unique geological, paleontological, biological, archeological, or historical features for public information and, as appropriate, develop interpretive information for these sites. (pg. III-17)

Alternative 3 includes two trails focused on interpreting forest resources (Beaver Lake and Pack Creek Interpretive Trails)

- (07)Manage dispersed recreation activities and use of trails in dispersed areas to not exceed the established PAOT/acre or mile of site or trail capacity (pg. III-18)
  - Maximum use and capacity levels are by Development Trail use and capacity range (PAOT/mile) of trail as shown in the Table 3 below

**Table 3. Capacity Levels**

	Capacity Range			
ROS Class	Very Low	Low	Moderate	High
Semi-Primitive Non-motorized PAOT/mile	2	3	9	11

Roaded Natural PAOT/mile	Based on trail design capacity
Rural PAOT/mile	Based on trail design capacity

Most of the existing trail system is within the capacity ranges set above. The exceptions would be sections of the Whole Enchilada Trail and possibly the Moonlight Meadows Trail that may exceed these capacities on busy weekends.

#### *Transportation System Management*

- (08) Coordinate transportation planning for Forest Development Roads with Forest Trails to provide continuity and fulfill Forest transportation needs. (pg.III-40)

The Proposed Action and action alternatives were designed to coordinate roads and trails to fulfill Forest transportation needs

#### *Trail System Management*

- (01) Maintain trails for designated uses and close trails to inappropriate uses (pg.III-42)

Under all alternatives trails would be maintained for designated uses in the areas and would be closed to inappropriate uses

- (02) Provide a range of trail opportunities in coordination with other Federal, State, or local agencies, and private industry both on and off NFS lands. (pg.III-42)

The Proposed Action and action alternatives were designed to provide a full range of trail opportunities across the La Sals. The trail system has been coordinated with adjacent State and private lands

#### *Trail Construction and Reconstruction*

- (01) Construct or reconstruct trails when needed as part of the transportation system (pg.III-42)
  - (a) Cross drains and conveyance structures are planned to acceptable work standards (FSM 1310) (pg III-42)

The Proposed Action and action alternatives would construct new trails where appropriate and reconstruct trails that do not meet forest service standards.

#### Management Unit Specific General Direction and Standards and Guidelines

*Semi –Primitive Recreation Emphasis Area*

- Dispersed Recreation Management
  - (02) Provide facilities such as foot and horse trails, Level 1 Campgrounds, and necessary signing as appropriate for the protection of resources (pg III-56).

Sustainable trails are being proposed in this emphasis area to protect resources by constructing trails at appropriate grades and in appropriate areas where numerous unplanned user created trails are occurring due to heavy recreation use.

- Recreation Management (Private and other public sector)
  - (01) Consider allowing private sector to provide recreation oriented support services (pg. III-56)

The Forest Service currently authorizes numerous outfitter and guides and shuttle operations in these areas to provide recreation oriented support services.

- Trail System Management
  - (01) Trails design, construction, and maintenance will be compatible with semi-primitive recreation opportunities (pg. III-57)

All proposed trails will be compatible with semi-primitive recreation opportunities

*Watershed Protection*

- Dispersed Recreation Management
  - (01) Provide for current recreation uses that do not conflict with watershed improvement projects (pg. III-78)

The proposed Terraces Trail in this emphasis area would not conflict with watershed improvement projects

*Research, Protection and Interpretation Units*

- Trail System Management
  - (02) Limit trails in RNA's to those needed for access to conduct research and for educational purposes (III-86)

Two trails are being proposed in the Proposed Action and Alternative 3 that would be partially located within the Emphasis Area. .3 miles of the proposed Tuk Trail would be located within the Mount Peale RNA, while this trail is not being proposed for research or educational purposes that trail would mitigate the braided user created trails in the area by encouraging users to stay on a constructed sustainable trail. The last .3 miles of the proposed trail in the RNA could be left undesignated if it was found to be inconsistent with the Emphasis Area. .8 miles of the proposed Top Shelf Trail would be designated within the Mount Peale RNA, this trail is being proposed

as a new opportunity for mountain biking and it's not needed for access for research or educational purposes, which would make the trail inconsistent with this Emphasis Area.

#### *General Big Game Winter Range Management Emphasis Area*

- Dispersed Recreation Management
  - (01) Manage recreational activities so they do not conflict with wildlife use of habitat (pg. III-62)

The Proposed Action and action alternatives would have varying levels of impacts on wildlife use of habitat. Potential impacts can be found in Chapter 3 of this EA.

#### *Range Management Emphasis Area*

- Dispersed Recreation Management
  - (01) Semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural recreation opportunities may be provided (pg. III-65)

All proposed actions in the Proposed Action and action alternatives would be consistent with this direction.

#### *Timber Management Emphasis Area*

- Dispersed Recreation Management
  - (01) Semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural recreation opportunities may be provided (pg. III-68)

All proposed actions in the Proposed Action and action alternatives would be consistent with this direction.

## **1.6 Tribal Consultation**

Local tribes were consulted during the scoping process and formal Section 106 consultation was conducted. One comment was received from the Navajo Nation which concluded that the Proposed Action will not impact any Navajo traditional cultural properties. A second comment was received from the Hopi Tribe concurring with the Forest Service and SHPO determination.

## **1.7 Public Involvement**

Prior to developing a Proposed Action an National Forest Management Act (NFMA) process was conducted that involved extensive public input over a span of several years. The Forest Service had previously worked closely with and received substantial input on trails from Grand County Trail Mix (a county sanctioned

working group dealing with trail issues on public lands in Grand County, Utah) and other trail user groups. In 2009 the Forest Service formally presented the idea of the comprehensive trail plan to Trail Mix and other user groups. During the summer of 2009 recreation staff met with outfitter and guides, local bike shops, environmental groups, and numerous local mountain bikers, hikers, climbers and equestrians.

Opinions on types, amount and general trail management vary greatly in the local community. Trail users in Grand County are especially concerned because the local economy relies heavily on tourism and outdoor recreation. Many local businesses actually use public land trail systems for their livelihoods as guides and shuttle operators. Due to the large amount public input and interest in the project, trail users were given another field season (summer of 2010) to come up with specific trail proposals to present to the Forest Service. During 2010 recreation staff again met with numerous user groups and Trail Mix to come up with a balanced Proposed Action.

After reviewing public proposals for specific trails and consulting with the Forest Service Interdisciplinary Team, a final Proposed Action was created that attempted to balance the various trail designation requests made by recreationists with resource concerns. A Legal Notice of Proposed Action was published in the Moab Times Independent on June 23, 2011. A scoping letter describing the Proposed Action with maps showing the locations of the trails was mailed to the District mailing lists, interested parties, outfitter and guides, local businesses and to all of those that had requested to be included on June 14, 2011. The Scoping letter and maps were also placed on the Manti-La Sal National Forest website. The official scoping period was 30 days long and ended on July 22, 2011. During the scoping period the District Recreation Manager and the District Ranger made two presentations on the Proposed Action to Trail Mix. One of these presentations was at a regularly scheduled monthly meeting of the organization and the other was during the evening to allow more participants to attend. Scoping letter and maps were provided to all of those that attended. Numerous phone-calls and office meetings also occurred with interested publics during the scoping period.

Forty-three public comments were received. Details on scoping comments can be found below in section 1.7.1 Scoping Summary. The public comments in response to the scoping letter and Proposed Action brought up four issues which drove the development of two additional alternatives that will be considered in this EA. Issues and alternatives are discussed further below. A copy of the Public Comment Analysis with specific comments and responses is included in the Project Record for the Moab Non-Motorized Trails Project.

After the scoping period the Moab Times Independent published an article on September 1, 2011 describing the process and the work that had been completed up to that point on the project.

On January 11, 2013 an update letter was sent out to all of those who had commented on the original scoping letter. The update letter provided a summary of public comments received during the scoping period and a description of the two alternatives that were created in response to the comments. The update letter also gave an updated time frame for completion of the EA and Decision as well as provided information on how to make further comments regarding the alternatives. The District presented the alternatives at a Trail Mix meeting and answered questions regarding the process. The Moab Times Independent and the Moab Sun News both ran front-page articles on the Moab Trails Project after receiving copies of the update letter. Forest Service staff also presented the proposed action and alternatives to the Grand County Council in the spring of 2013.

Twenty-four written letters, thirty-six emails and numerous phone calls were received in response to the update letter, with a wide range of opinions expressed.

### **1.7.1 Scoping Summary**

A wide range of comments were received on the Proposed Action. Many commenters requested additional trails beyond those proposed and many thought the Forest Service needed to reduce the number of existing trails to mitigate impacts to wildlife, watersheds and to avoid social conflicts.

Many commenters agreed that there is a need in the La Sal Mountains for additional trails for all users and new trails should focus on being sustainable, user friendly, creating loops and new trail opportunities that the current trail system does not provide. Many comments focused on the reliance of local economies (Moab) on designated trail systems and the need for new trails that would continue to support the local tourism based economy. Several comments were concerned that the current trail system was too oriented towards “expert or extreme trails” and that new trail proposals needed to designate intermediate and beginner trails. Numerous specific new trails were proposed by commenters.

Many commenters were concerned that the new trails in the Proposed Action would have impacts on wildlife, habitat, soils, riparian areas, cultural resources and wilderness values and would create new conflicts with other users. Several comments were concerned that some existing trails were already having detrimental impacts to forest resources and causing social conflicts and should be closed to use. Commenters were concerned that the heavy mountain bike use on several of the existing trails were basically precluding uphill travel by hikers and equestrians and that something needed to be done to reduce social conflicts. The Proposed Action included changing the designation of 13.8 miles of existing trails and limiting them to certain types of uses (i.e. foot and horse only) to reduce user conflicts and provide areas where users could find more solitude if desired. Some commenters were in favor of the designation changes and requested additional changes. Others thought that limiting types of uses on trails and “zoning” use areas should be a last resort and

that trail design, alternating days, education and other methods would be a better approach.

The Proposed Action also included changing the designation of the 3.2 mile long Carpenter Basin trail to allow for two-wheel motorized use, with some seasonal restrictions (closed to motorized use during the fall and winter months). Some of the public were concerned with changing this designation and were concerned about its' impact to wildlife and other users. Other commenters were supportive of the change as long as there were seasonal restrictions.

The Proposed Action included a seasonal closure on the higher elevation trails (Moonlight Meadows and Burro Pass) until July 1<sup>st</sup>, to allow the soils time to dry out and avoid potential impacts to big game using the areas in the early summer for calving and fawning. Some commenters were supportive of the seasonal restrictions. Others requested that the closure should apply to all users and not based on a date but on trail conditions.

The Proposed Action would prohibit commercial shuttle use in the La Sal Pass area. Several commenters were concerned that there is too much commercial recreation use (i.e. shuttle companies and outfitter/guides) and that the designation of new down-hill oriented trails would lead to increased commercial use. Others commented that the Forest Service should be looking at increasing commercial use to support the local economy and to spread out use from other heavily used areas.

Comments from within the mountain biking community varied on aspects of the Proposed Action. Some members of the biking community expressed the opinion that new trail designations should focus on longer trails that are more difficult and other mountain bikers thought the focus should be on providing intermediate level mountain biking opportunities that are currently missing from the La Sal trail system. During meetings and conversations, it was observed that some local mountain bikers were also supportive of prohibiting commercial shuttles in some portion of the La Sals, so that part of the range would remain "uncommercialized". Other mountain bikers thought the entire range should remain open to the potential for commercial shuttle operations.

Other concerns that were commented on were the NEPA/planning process and management of trails to access popular climbing areas.

## **1.8 Issues Recommended for Alternative Development**

To identify if concerns that were raised in scoping described unresolved conflicts with the Proposed Action, and thus suggested the need to develop alternatives to the Proposed Action, the ID team and Responsible Official evaluated concerns against the following:



1. Was the concern beyond the scope of the project or not relevant to the action proposed (e.g. identified cause-effect relationship would not result should the proposal be implemented)?
2. Was the concern addressed and resolved through application of Forest Plan standards and guidelines or best management practices?
3. Was the concern addressed and resolved through implementation of project-specific design features and mitigation measures (e.g., Best Management Practices and Soil and Water Conservation Practices) applied to the Proposed Action?
4. Was the concern addressed during processes or analyses routinely conducted by the ID team?
5. Concerns which remained were determined to be unresolved conflicts with the Proposed Action and were carried into alternative development.

Key NEPA issues are listed below. These issues are the points of unresolved conflict with the Proposed Action identified during internal and external scoping efforts. Following each issue are indicators that will be used in the effects analysis in Chapter 3. These indicators are used to compare how the different alternatives address the issue.

### **1.8.1 Issue # 1 Effects of Proposed Action on Recreation Opportunities**

**Issue - The Proposed Action does not meet all of the needs of trail users in the La Sals, including concerns that the Proposed Action provides insufficient trail opportunities and concerns that the Proposed Action will not manage perceived user conflicts on heavily used trails.**

The Forest Service received comments that the Proposed Action did not provide sufficient trail related opportunities that forest users were seeking. Many commenters requested additional trails beyond those proposed. Many commenters agreed that there is a need in the La Sal Mountains for additional trails for all users, and new trails should focus on being sustainable, user friendly, creating loops and new trail opportunities that the current trail system does not provide. Several comments were concerned that the current trail system was too oriented towards “expert or extreme trails” and that the Proposed Action did not provide new trail proposals needed to designate intermediate and beginner trails. Many commenters were concerned about the change in trail designations limiting some trails to foot and horse use only, and felt that it was reducing the opportunities for mountain biking in the La Sals.

Numerous specific new trails were proposed by commenters. The Forest Service reviewed each new trail proposal to determine if there were obvious resource concerns. If the trail did not have obvious resource concerns and it provided an underrepresented opportunity (intermediate trail, access to peaks, etc...), then it was

added to Alternative 3 to be further analyzed in this EA. The designation changes in the Proposed Action were dropped from Alternative 3 as well, so that all trails would remain open to all non-motorized uses under the alternative.

The Forest Service also received many comments expressing concern that the Proposed Action would not deal with the existing social conflicts on some of the trails in the La Sals and were concerned that new trails may increase the conflicts. Social conflicts in relation to trail management refers to the perception by a trail user that other trail users are impacting their desired recreation experience. Social or user conflicts can be a result of trail crowding, different types of trail users (i.e. hikers and mountain bikes) on the same trail at the same time or can be a safety issue such as when fast downhill bike traffic meets uphill horse traffic and a horse bolts to escape the perceived threat. All of these conflicts have been reported at one time or another on the existing trail system in the La Sales.

Alternative 4 proposes additional trail restrictions that are designed to reduce potential social conflicts.

Additional restrictions on existing trails designed to reduce potential will be analyzed in Alternative 4 in this EA.

#### **1.8.1.1 Resource Condition Indicator**

- Miles of non-motorized trails open to foot only
- Miles of non-motorized trails open to foot and horse only
- Miles of non-motorized trail open to all non-motorized uses

### **1.8.2 Issue #2 Effects of Proposed Action on Wildlife Resources**

**Issue- The Proposed Action would designate new trails that could impact wildlife and wildlife habitat**

The Forest Service received many comments expressing concern about the amount of new trails in the Proposed Action and were concerned they would have negative effects on wildlife and their habitat.

Additional restrictions on existing trails and the reductions of overall trail mileage were used to create Alternative 4 which will be analyzed in this EA.

#### **1.8.2.1 Resource Condition Indicator**

- Miles of trail within elk winter range
- Miles of trail within elk summer range
- Miles of trail within deer summer range
- Acres of secure summer habitat for elk
- Acres of secure summer habitat for deer
- Trails within 0.5 miles of known Golden eagle nests (miles)
- Miles of trail within known Northern goshawk Post Fledging Areas

### **1.8.3 Issue # 3 Effects of Proposed Action on Riparian Resources**

**Issue- The Proposed Action would designate new trails that could impact riparian resources (i.e. springs, wetlands, streams)**

The Forest Service received comments internally and from the public expressing concern about the amount of new trails in the Proposed Action and were concerned they would have negative effects on riparian resources. Risk to riparian resources from trail construction include the potential for sediment to wash from the trail into the wetland potentially filling it over time and potentially entrenching and draining the wetland if a trail is improperly constructed and maintained.

Additional restrictions on existing trails and the reductions of overall trail mileage were used to create Alternative 4 which will be analyzed in this EA.

#### **1.8.3.1 Resource Indicator**

- number of new trails with potential high or moderate risk to riparian resources
- Number of stream crossings from new trails
- Number of spring sites crossed from new trails
- Number of wetlands crossed by new trails

### **1.8.4 Issue #4 Effects of the Proposed Action on Roadless and Wilderness Character**

**Issue- The Proposed Action would designate new trails within the Inventoried Roadless Areas (IRAs) that could have impacts to their wilderness and roadless character**

The Forest Service received comments internally and from the public expressing concern new trails within the IRAs and were concerned they would have negative effects on their wilderness and roadless character.

Additional restrictions on existing trails and the reductions of overall trail mileage were used to create Alternative 4 which will be analyzed in this EA

#### **1.8.4.1 Resource Indicator**

- Number of miles of new trail open to foot travel only within IRAs
- Number of miles of new trail open to foot and horse travel only within IRAs
- Number of miles of new trail open to all non-motorized travel within IRAs
- Number of miles of trail proposed for removal from within IRAs
- Number of miles of proposed trail designation changes within IRAs
- Number of miles of trail designation changed to allow for motorcycle use in IRAs

### **1.9 Document Structure**

This EA incorporates by reference the project record. The project record contains specialist reports and other technical documentation used to support the analysis and conclusions in this EA. This document is tiered to the Final EIS and planning record supporting the 1986 Forest Plan as amended (USDA Forest Service, 1986).

Detailed information that supports the analyses presented in this document, unless specifically noted otherwise, is contained in the project planning record located at the Moab/Monticello District Office.

This document consists of the following main chapters:

- Chapter 1 – Purpose and Need for Action: Describes the Proposed Action, purpose and need of the action, decisions to be made, public involvement, and identification of key issues.
- Chapter 2 – Alternatives: Includes mitigation measures common to all action alternatives, descriptions of the alternatives considered in detail, and a comparative summary of the environmental consequences of each alternative analyzed in detail. Chapter 2 also includes a Table summarizing the effects of each alternative on other forest resources and the whether the alternative is consistent with Forest Plan direction.
- Chapter 3 – Affected Environment and Environmental Consequences: Describes the existing conditions of the resources within affected areas and the environmental impacts of the alternatives in relation to issues that were identified through the NEPA process.
- Chapter 4 – Consultation and Coordination: Provides a list of the primary preparers of this document; a list of agencies, organizations, and persons who were consulted or from whom scoping comments and/or comments during the 30-day notice and comment period were received.

Seven appendices follow the main chapters. The appendices include;

- Appendix A- Map of the Existing Trail System (No Action Alternative)
- Appendix B – Map of Proposed Action
- Appendix C- Map of Alternative 3
- Appendix D – Map of Alternative 4
- Appendix E- Trail Design Parameters
- Appendix F- Best Management Practices and Soil and Water Conservation Practices
- Appendix G- Implementation and Monitoring

## **CHAPTER 2. ALTERNATIVES**

### **2.1 Introduction**

This chapter describes and compares the No-Action Alternative, Proposed Action Alternative, and two additional alternatives developed to address key issues identified in Chapter 1. This chapter concludes with a comparative summary of the alternatives considered in detail (section 2.3). This comparison, combined with the more detailed disclosure in Chapter 3, provides the information necessary for the Responsible Official to make an informed choice between alternatives. Maps for each alternative considered in detail can be found in the Appendix.

#### **2.1.1 Definitions**

For the purposes of this document the following definitions apply

##### Non-motorized uses

Methods of transportation not requiring the use of a motor including; foot, horse, bikes, skiing, and snowshoeing

##### Non-Motorized Trails

A route open to non-motorized uses

##### Mechanized use

A means of transportation using wheels and gears but is propelled by human power, i.e. a bicycle

##### Primitive Recreation

Non-motorized and non-mechanized forms of recreation i.e. hiking, horses, canoeing, etc...

##### Social or User Conflict

The perception by a trail user that other trail users are impacting their desired recreation experience. Social or user conflicts can be a result of trail crowding, different types of trail users (i.e. hikers and mountain bikes) on the same trail at the

same time or can be a safety issue such as when fast downhill bike traffic meets uphill horse traffic and a horse bolts to escape the perceived threat.

## **2.2 Alternatives Analyzed in Detail**

### **2.2.1 Alternative 1: No Action**

Under the No-Action Alternative, 63.5 miles of non-motorized trail would remain on the trail system and would be open to all forms of non-motorized uses.

No trails would be removed from the system.

No changes would be made to current trail designations

No new trails would be designated.

No seasonal closures would be put into effect.

Authorized commercial shuttle companies would be allowed to continue operate in all areas of the La Sals.

Table 4 below provides a trail mileage summary of the No Action Alternative (see map in Appendix A for trail locations)

**Table 4. Trail Mileage Summary of the No Action Alternative**

<b>Current Trails in the Project Area</b>	<b>Mileage (approximate)</b>
Trails open to all non-motorized uses: <ul style="list-style-type: none"><li>- Bachelor Basin Trail #5034- 6.6 miles</li><li>- Boren Mesa Trail #5037 - 5 miles</li><li>- Burro Pass Trail #5315- 2.4 miles</li><li>- Carpenter Basin Trail # 5028 – 3.2 miles</li><li>- Clark Lake Trail #5141 -2.2 miles</li><li>- Clark Lake Loop Trail #5144 -1 mile</li><li>- Fisher Mesa Trail #5180 – 2.1 miles</li><li>- Deep Creek # 5101 – 3.5 miles</li><li>- Hazard County Trail # 5903- 3 miles</li><li>- Mountain View Trail # 5185 - .9 miles</li><li>- Hell Canyon Trail # 5039- 2.1 miles</li><li>- Miners Basin Trail #5040- 3.5 miles</li><li>- Moonlight Meadows Trail #5179- 1.5 miles</li><li>- Squaw Springs Trail #5038- 4.1 miles</li></ul>	63.5

<ul style="list-style-type: none"> <li>- Pack Creek Trail #5041- 4.1 miles</li> <li>- UPS Trail # 5973 – 3 miles</li> <li>- South Mountain/Pack Creek # 5075 - .4 miles</li> <li>- South Mountain # 5029 – 8.9 miles</li> <li>- Doe Canyon # 5100 – 2 miles</li> <li>- Pole Canyon # 5035 – 3 miles</li> <li>- Warner/Beaver Basin # 5033 – 4.4 miles</li> <li>- Warner to Oowah Trail #030- 1 mile</li> <li>- 030 to 033 Trail- .25 miles</li> </ul>	
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## 2.2.2 Alternative 2: Proposed Action

The Proposed Action would include keeping approximately 60 miles of existing authorized non-motorized trails on the system as well as a mix of designating new trails, changing the use designation of some existing trails, placing seasonal closures on some trails, and closing and reclaiming some existing trails that are no longer needed on the trail system. The Proposed Action would also prohibit commercial mountain bike shuttle operations in the La Sal Pass Area to reduce the potential for increased trail conflicts in that portion of the District.

Table 5. below provides a trail mileage summary of the Proposed Action (see maps in Appendix. B for trail locations)

**Table 5. Trail Mileage Summary of the Proposed Action**

<b>Action</b>	<b>Mileage (approximate)</b>
Keep existing authorized non-motorized trails on the system	60
Remove existing trails from system ( <i>Deep Creek Trail #5101</i> )	3.5
Change existing designation from non-motorized to “Open to two-wheeled motorized vehicles” ( <i>Carpenter Basin Trail #5028</i> ) with a seasonal restriction on motorized vehicles from Sept 15 <sup>th</sup> –April 15 <sup>th</sup>	3.2
Change designation of system trail from “open to all non-motorized uses” to “open to foot and horse use only on the following system trails: <ul style="list-style-type: none"> <li>• <i>Mountain View Trail # 5185 . 9 miles</i></li> <li>• <i>South Mountain/Pack Creek # 5075 .4 miles</i></li> </ul>	12.8

<ul style="list-style-type: none"> <li>• <i>Portion of South Mountain # 5029 4 miles</i></li> <li>• <i>Doe Canyon # 5100 2 miles</i></li> <li>• <i>Pole Canyon # 5035 3 miles</i></li> <li>• <i>Portion of Warner/Beaver Basin # 5033 2.5 miles</i></li> </ul>	
<p>Place seasonal closure for bicycles until July 1<sup>st</sup> on the following system trails</p> <ul style="list-style-type: none"> <li>• <i>Portion of Burro Pass Trail # 5315</i></li> <li>• <i>Portion of the Moonlight Meadows # 5179</i></li> </ul>	4.2
<p>Add trails to system that are open to hiking use only</p> <ul style="list-style-type: none"> <li>• <i>Mill Creek Overlook Accessible Trail- .1 miles</i></li> <li>• <i>Mill Creek Climbing Access Trails- 1.2 miles</i></li> <li>• <i>Brumley Creek Climbing Access Trail- .7 miles</i></li> <li>• <i>Brumley Arch Trail- .2 miles</i></li> <li>• <i>Mill Creek Alpine Loop- .7 miles</i></li> </ul>	2.9
<p>Add trails to system that are open to hiking and horse use only</p> <ul style="list-style-type: none"> <li>• <i>Laurel Ridge- 1.8 miles</i></li> <li>• <i>Gold Basin- 1.9 miles</i></li> <li>• <i>Manns Peak Trail- 1.1 miles</i></li> <li>• <i>Mt Tuk Trail - 1.6 miles</i></li> <li>• <i>Gold Knob Trail- .6 miles</i></li> </ul>	7
<p>Add trails to system that are open to all non-motorized uses</p> <ul style="list-style-type: none"> <li>• <i>Fisher Mesa Extensions- 1.5 miles</i></li> <li>• <i>Upper Schuman Trail-.3 miles</i></li> <li>• <i>Squaw Springs Exit-1.8 miles new /3.7 miles on road</i></li> <li>• <i>Terraces Trail-.8 miles</i></li> <li>• <i>Burlfriends Trail- 3.5 miles</i></li> <li>• <i>Shepherders Trail-.6miles</i></li> <li>• <i>Medicine Lake Trail- 1.1miles</i></li> </ul>	13.3 (includes 3.7 miles on existing Forest Service Roads)



## 2.2.3 Alternative 3 Increased Trail Opportunities

This alternative was created in response to public comment that the Proposed Action did not provide sufficient trail opportunities and that additional trails needed to be added to the system that provided for a wider range of trail experiences.

Additional trails that were proposed by the public that appeared to meet the purpose and need of the project were used to create Alternative 3.

Under Alternative 3 approximately 63.5 miles of existing non-motorized trails would be kept on the system. No system trails would be removed under this alternative. The trail use designations on existing trails would not be changed under this alternative. Seasonal closures on Burro Pass and Moonlight Meadows would occur but would be based on trail conditions instead of a fixed date. All areas in the La Sals would remain open to commercial shuttle services under this alternative.

This alternative would add a total of 50.5 miles of new trails. Table 6 below shows a summary of trail mileages for Alternative 3. (See maps in Appendix C. for locations of trails)

**Table 6. Trail Mileage Summary of Alternative 3**

Action	Mileage (approximate)
Keep existing authorized non-motorized trails on the system	63.5
Remove existing trails from system	0
Change existing designation from non-motorized to “Open to two-wheeled motorized vehicles” ( <i>Carpenter Basin Trail #5028</i> ) with a seasonal restriction on motorized vehicles from Sept 15 <sup>th</sup> –April 15 <sup>th</sup>	3.2
Change designation of system trail from “open to all non-motorized uses” to “open to foot and horse only”	0
Place seasonal closure for bicycles based on trail conditions on the following system trails <ul style="list-style-type: none"> <li>• <i>Burro Pass Trail # 5315</i></li> <li>• <i>Moonlight Meadows # 5179</i></li> <li>• <i>Geyser to Burro Pass</i></li> </ul>	5.7
Add trails to system that are open to hiking only including the following trails <ul style="list-style-type: none"> <li>• <i>Mill Creek Overlook Accessible</i></li> </ul>	3.1

<p><i>Trail- .1 miles</i></p> <ul style="list-style-type: none"> <li>• <i>Mill Creek Climbing Access</i></li> </ul> <p><i>Trails- 1.2 miles</i></p> <ul style="list-style-type: none"> <li>• <i>Brumley Creek Climbing Access</i></li> </ul> <p><i>Trail- .7 miles</i></p> <ul style="list-style-type: none"> <li>• <i>Brumley Arch Trail- .2 miles</i></li> <li>• <i>Beaver Lake Interpretive Trail- .1 miles</i></li> <li>• <i>Pack Creek Interpretive Trail- .1 miles</i></li> <li>• <i>Mill Creek Alpine Loop- .7 miles</i></li> </ul>	
<p>Add trails to system that are open to hiking and horse only including the following trails;</p> <ul style="list-style-type: none"> <li>• <i>Gold Basin Loop -.9 miles</i></li> <li>• <i>Laurel Ridge- 1.8 miles</i></li> <li>• <i>Gold Basin- 1.9 miles</i></li> <li>• <i>Manns Peak Trail- 1.1 miles</i></li> <li>• <i>Mt Tuk Trail - 1.6 miles</i></li> <li>• <i>Gold Knob Trail- .6 miles</i></li> <li>• <i>Horse Mountain Trail- .7 miles</i></li> <li>• <i>Lackey Basin Extension- .3 miles</i></li> </ul>	8.9
<p>Add trails to system that are open to all non-motorized uses including the following trails;</p> <ul style="list-style-type: none"> <li>• <i>Jimmy Keen Flat Trails-7.7 miles</i></li> <li>• <i>Geyser Pass Singletrack- 3.2 miles</i></li> <li>• <i>Top Shelf Trail- 4.4miles</i></li> <li>• <i>Enchilda Bypass -.3 miles</i></li> <li>• <i>Warner Lake Family Loop-1 mile</i></li> <li>• <i>Bald Mesa Loop-1.3 miles</i></li> <li>• <i>Needle in the Haystack 1.6 miles</i></li> <li>• <i>Geyser Pass to Burro- 1.4 miles</i></li> <li>• <i>Horse Creek to Geyser- 1 miles</i></li> <li>• <i>Bear Mountain Traverse-.8 miles</i></li> <li>• <i>Kane Springs Connection-3.5 miles</i></li> <li>• <i>Boren to Schumann- 2.7 miles</i></li> <li>• <i>Fisher Mesa Extensions- 1.5 miles</i></li> <li>• <i>Upper Schuman Trail-.3 miles</i></li> <li>• <i>Squaw Springs Exit-1.8 miles new /3.7 miles on road</i></li> </ul>	38.5

<ul style="list-style-type: none"> <li>• <i>Terraces Trail-.8 miles</i></li> <li>• <i>Burlfriends Trail- 3.5 miles</i></li> <li>• <i>Sheepherders Trail-.6miles</i></li> <li>• <i>Medicine Lake Trail- 1.1miles</i></li> </ul>	
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## 2.2.4 Alternative 4 Increased Recreation Restrictions

This alternative was created in response to public comment that the existing trail system and current trail uses are already having negative impacts on forest resources and is causing social conflicts.

Alternative 4 would include keeping approximately 57.7 miles of existing authorized non-motorized trails on the system and removing 3.5 miles of the Deep Creek trail and 2.3 miles of the Bachelor Basin trail from the system. Alternative 4 would change the designation of 24.6 miles of existing system trails from open to all non-motorized uses to open to foot and horse only.

Seasonal closures on Burro Pass and Moonlight Meadows would occur each year until July 1st. The designation of the Carpenter Basin trail would not be changed to allow for motorcycle use. This alternative would also prohibit commercial mountain bike shuttle operations in the La Sal Pass Area to reduce the potential for increased trail conflicts in that portion of the District.

The South Mountain Trail #029, Squaw Springs Trail #038 Boren Mesa Trail #037, Hell Canyon Trail # 039 and the Warner to Oowah Trail # 030 have been identified as needing to be rerouted to locate them on grades that are better suited for recreation purposes and are within current Forest Service trail standards. Under this alternative these trails would be rerouted.

Table 6 below shows a summary of trail mileages for Alternative 4. (See maps in Appendix D. for locations of trails)

**Table 6. Trail Mileage Summary of Alternative 4**

<b>Action</b>	<b>Mileage (approximate)</b>
Keep existing authorized non-motorized trails	57.7
Remove existing trails from system including the following trails; <ul style="list-style-type: none"> <li>• <i>Deep Creek Trail #5101</i></li> <li>• <i>Bachelor Basin Trail # 5034</i></li> </ul>	5.8
Change existing designation from non-motorized to “Open to two-wheeled motorized vehicles” ( <i>Carpenter Basin</i>	0

Trail #5028) with a seasonal restriction on motorized vehicles from Sept 15 <sup>th</sup> –April 15 <sup>th</sup>	
<p>Change designation of system trail from “open to all non-motorized uses” to “open to foot and horse only on the following system trails:</p> <ul style="list-style-type: none"> <li>• <i>Miners Basin #040 3.5 miles</i></li> <li>• <i>Bachelor Basin #034 5.4 miles</i></li> <li>• <i>Mountain View Trail # 5185 .9 miles</i></li> <li>• <i>South Mountain/Pack Creek # 5075 .4 miles</i></li> <li>• <i>Portion of South Mountain # 5029 6 miles</i></li> <li>• <i>Doe Canyon # 5100 2 miles</i></li> <li>• <i>Pole canyon # 5035 3 miles</i></li> <li>• <i>Hell Canyon Trail #0391 .9 miles</i></li> <li>• <i>Portion of Warner/Beaver Basin # 5033 2.5 miles</i></li> </ul>	24.6
<p>Place seasonal closure for bicycles until July 1<sup>st</sup> on the following system trails</p> <ul style="list-style-type: none"> <li>• <i>Portion of Burro Pass Trail # 5315</i></li> <li>• <i>Portion of Moonlight Meadows # 5179</i></li> </ul>	4.2
<p>Add trails to system that are open to hiking only, including the following trails;</p> <ul style="list-style-type: none"> <li>• <i>Mill Creek Overlook Accessible Trail- .1 miles</i></li> <li>• <i>Mill Creek Climbing Access Trails- 1.2 miles</i></li> <li>• <i>Brumley Creek Climbing Access Trail- .7 miles</i></li> </ul>	2
<p>Add trails to system that are open to hiking and horse only, including the following trails;</p> <ul style="list-style-type: none"> <li>• <i>Manns Peak Trail-1.1 miles</i></li> <li>• <i>Mt Tuk Trail -1.6 miles</i></li> <li>• <i>Gold Knob Trail- .6 miles</i></li> <li>• <i>Shepherders Trail-.6 miles</i></li> </ul>	4
Add trails to system that are open to all	0

non-motorized uses	
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## 2.3 Summary and Comparison of Alternatives by Resource Indicators

Table 7 summarizes the differences between the Alternatives and compares each of the Alternatives against indicators that were discussed in section 1.9.

**Table 7. Comparison of Alternatives using Indicators**

Indicators	Alternatives			
	1	2	3	4
	No Action	Proposed Action	Increased Trail Opportunities	Increased Recreation Restrictions
<b>Response to Issue- Impacts to Recreation Opportunities</b>				
Miles of Trail Open to All Non-Motorized Uses	63.5	60.5	102	27.4
Miles of Trail Open to Foot and Horse Use Only	0	19.8	8.9	28.6
Miles of Trail Open to Foot Use Only	0	2.9	3.1	2
<b>Response to Issue- Impacts to Wildlife Resources</b>				
Miles of Trail in Elk Winter Range	22.8	25.9	36.5	23.7
Miles of trails in Deer Summer Range <sup>1</sup>	75.1	94.4	125.0	84.1
Miles of trails in Elk Summer Range <sup>1</sup>	51.2	63.7	84.8	54.2
Secure Summer Deer Habitat - (acres) <sup>2</sup>	33,313	32,382	30,460	33,202
Secure summer Elk habitat (acres) <sup>2</sup>	18,313	16,816	14,798	17,259
Trails within 0.5 miles of known golden eagle nests (miles)	7.1	7.85	7.85	7.85
Miles of Trail within known Northern Goshawk Post Fledging Areas	7.7	9.1	11.2	7.2

<b>Response to Issue- Impacts on Riparian Resources</b>				
Number of New Trails with Potential High or Moderate Risk to Riparian Resources <sup>3</sup>	0	4	10	2
Number of Stream Crossings by New Trails	0	8	14	0
Number of Springs Crossed by New Trails	0	3	10	0
Number of Wetlands Crossed by New Trails	0	9	15	0
<b>Response to Issue – Impacts to Roadless and Wilderness Character</b>				
Miles of new trail open to foot only in IRAs	0	1.3	1.4	.7
Miles of new trail open to foot and horse only in IRAs	0	6.5	7.7	3.9
Miles of new trail open to all non-motorized users in IRAs	0	5.1	20	0
Miles of designation change to allow for motorcycle use in an IRA	0	3.2	3.2	0
Miles of trail removed from IRAs	0	3.5	0	4.7
Miles of trail designations changed to foot and horse only within IRAs	0	11.5	0	22.1

<sup>1</sup>mileage includes dual designated (motorized) trails not included in the non-motorized project, but important for evaluation of total miles of recreational trails in big game habitats

<sup>2</sup>secure habitat includes contiguous areas of at least 50 acres with no roads or trails: 0.25 mile buffer for elk, 200 yard trail buffer for deer

<sup>3</sup>Risk to riparian resources was rated as Low, Moderate or High. Low risk trails were those trails that had very little probability of impacting riparian resources, moderate trails were those that had the potential to impact riparian resources and high risk were those determined to likely impact riparian resources if the trails were not mitigated in some way.

## CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 includes a detailed analysis of potential effects in relation to identified issues. The chapter is organized by issue.

A summary of effects to other resources can be found in the Project Record.

### 3.1 Issue #1- Effects of Proposed Action on Recreation Opportunities

**Issue-** The Proposed Action would not provide sufficient trail opportunities that the public desires and would not manage the potential for social conflicts on the trails

This section discusses the effect of each alternative on the amount and type of trail related recreation opportunities available. The quantity and type of trails provided can positively affect the opportunities for various types of non-motorized trail users but may also negatively affect the use and enjoyment of the National Forest by those recreationists seeking a primitive recreation experience.

The mileage of designated trails available for use by different types of non-motorized trail users were calculated to assess the opportunity for each type of trail users by each alternative. Results are shown below in Table 8.

**Table 8. Trail Mileage by Use and Alternative**

	Alternatives			
	1	2	3	4
	No Action	Proposed Action	Increased Trail Opportunities	Increased Recreation Restrictions
Miles of Designated Trails Open to all Non-Motorized Uses	63.5	60.5	102	27.4
Miles of Designated Trails Open to Foot and Horse Only	0	19.8	8.9	54.9
Miles of Designated Trails Open to Foot Only	0	2.9	3.1	2
Miles of Trail Designation Changed to Allow for Motorcycle Use	0	3.2	3.2	0

Total Mileage of New Trails Proposed	0	23.2 (3.7 on existing FS Roads)	50.5	6
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### **3.1.1 Affected Environment (Recreation Opportunities)**

#### **Recreation Opportunity Spectrum (ROS) Classes**

The project area includes a variety of ROS classes including; Roaded Natural Appearing, Semi-Primitive Motorized, Semi-Primitive Non-Motorized and a small portion in Primitive. Below are summaries of the opportunities managed for in each of the ROS Classes.

The expected recreational experience for the Roaded Natural Appearing ROS class are; less isolation from sights and sounds of humans than other ROS classes, challenge and risk associated with primitive recreation is not very important, opportunities for both motorized and non-motorized recreation area possible.

The expected recreational experience for the Semi-Primitive Motorized ROS class are; to provide some isolation from the sights and sounds of humans, independence, and closeness to nature, tranquility, and self-reliance, tranquility and self-reliance through the application of outdoor skills in an environment that offers challenge and risk. Opportunities to have a high degree of interaction with the natural environment. Opportunities to use motorized equipment are available in the area.

The expected recreational experience for the Semi-Primitive Non-Motorized ROS class are; high but not extremely high probability of experiencing isolation from the sights and sounds of humans, independence closeness to nature, to provide some isolation from the sights and sounds of humans, independence, and closeness to nature, tranquility, and self-reliance through the application of outdoor skills in an environment that offers challenge and risk.

The expected recreational experience for the Primitive ROS class are; extremely high probability to experience isolation from the sights and sounds of humans, independence, and closeness to nature, tranquility, and self-reliance through the application of outdoor skills in an environment that offers a high degree of challenge and risk.

#### **Existing Trail System**

Approximately 63.5 miles of trail are currently designated and open to all non-motorized uses in the project area. Below is a summary of trail types and estimated use by general location in the project area. For this analysis trail use has generally been determined by using voluntary trail registers, which have not proven to be highly reliable measures of use; however it is currently the only data available for most of the trails.



### *Fisher Mesa Area*

The Fisher Mesa Trail provides a single-track experience that follows along the rim of Fisher Mesa. A loop is possible by connecting the trail with Forest System Roads. While several cycling outfitters and guides are permitted to operate on this trail, very few of them actually use it for guiding.

According to Forest Service trail registration counts approximately 164 people per year used the trail; the majority of users were mountain bikers (approximately 74%). Use levels on the trail appear to be fairly stable.

### *Northern Portion of the La Sals-*

The main trails in this area include the Bachelors Basin (034), Warner to Miners (040), and Mountain View (033) trails. The trails in this area are all at higher elevations and are generally located in steep, rough and rocky terrain. Several outfitters and guides are permitted in the area. No cycling guides operate trips in the area but several permittees use the area for guided backpacking and hiking.

Trail registers show on average approximately 184 people a year use the Warner to Miners with the majority (over 95%) being hikers. The Bachelor Basin trail is little used as the northern access to the trail begins on private property and there is no public parking. Trail use numbers appear to be stable. These trails are accessed primarily from the Warner Lake and Miners Basin Trailheads.

### *Central Portion of the La Sals-*

The easy road access from Moab, proximity to developed campgrounds, incredible scenery, alpine peaks and lakes, and websites, articles and guidebooks directing users to the area all combine to make the trails in the central portion of the range the most heavily used in the project area.

The main trails in this area include Warner to Beaver, Burro Pass, Hazard County, Upper Porcupine Singletrack (UPS), Moonlight Meadows, Clark Lake, Boren Mesa, Squaw Springs, Schumann Gulch, Warner to Oowah and Deep Creek.

Portions of the Burro Pass, Warner to Beaver, Hazard County and UPS trails are combined to form the very popular “Whole Enchilada” trail that is located on Forest Service and BLM managed lands. With the completion of the connecting trails in 2009 for the “Whole Enchilada”, a large amount of attention became focused on the unique and challenging opportunity to start high in the La Sal Mountains and ride all the way to Moab. Articles, websites and guidebooks continue to promote the trail and use has steadily continued to increase, the majority of use is associated with authorized commercial shuttle companies.

The “Whole Enchilada” opens up in stages as the snow melts. The first access point on Forest Service lands is the Kokopelli Trail of the Sand Flats Road to access the UPS portion, next is from the Loop Road onto the Kokopelli Trail, next is the Hazard

County Trailhead and the final access to open up is the Geyser Pass/Burro Pass Trailhead that often does not open until late June or early July.

Trail registers for the “Whole Enchilada” are located at the Hazard County Trailhead and Burro Pass Trailhead. Approximately 430 people registered per year at the Hazard County Trailhead with 95% of the use being mountain bikers. Approximately 228 users per year registered at the Burro Pass Trailhead with use of those registering at approximately 50% foot travel and 50% mountain biking. The numbers of users registering on this trail is probably very low. Due to the relatively long distance of retrieving vehicles from Geyser Pass (2 hours round trip from Moab), the majority of use along the “Whole Enchilada” is associated with one of the authorized shuttle companies operating on the District. This commercial use has seen a steady increase since completion of the “Whole Enchilada” and is probably a better indicator of usage on the trail than the voluntary registration numbers. Authorized shuttle companies reported shuttling 1,506 users (mountain bikers) to trailheads along the “Whole Enchilada” in 2008. In 2012 reported use had risen to 4,065, with a high of 4,575 users in 2010. This use is generally focused on the mornings of fall weekends. Between the times of 9:00-11:00 during this time it is not unusual to see large groups of 20 or more riders coming down the trail after being dropped off by shuttle companies. This trail use is a valid form of recreation on Forest Service managed lands, but other recreationists are beginning to perceive that it is impacting their experience on the trail. These social impacts are generally associated with hikers or equestrians travelling uphill from Warner Lake and encountering large groups of cyclists often travelling at fast speeds downhill. The Forest Service receives several phone calls a year reporting the perceived social impact and many of the public comments received on the Moab Non-Motorized Trails Project brought this up as an issue. This perceived impact is generally limited to the heavily used weekends and it is normal to not see any downhill mountain biker use on the trail outside of the busy weekend mornings.

Trail registers in the area show that approximately 157 people a season (May-October) registered at the Moonlight Meadows Trailhead. This use number is certainly very low as trail registers do not capture all of the different access points onto this trail. According to trail registers about 70% of the use accessing the Moonlight Meadows/Clark Lake/ Oowah Lake trail system from the upper trailhead at Geyser Pass is mountain bike use. Approximately 370 users per year signed the register at the Oowah Lake Trailhead to access the lower portion of the same trail system, but this use is primarily (95%) hiking up the trail system to Clark Lake or Warner Lake. Use on these trails appears to be increasing each year.

Approximately 480 trail users per year have signed in at the Squaw Springs Trailhead. The majority of this use appears to be users heading for the Brumley Creek area, which is a short distance from the trailhead. Use on this trail is rapidly increasing, primarily due to people discovering the canyon and arch on Brumley Creek. The next most popular use on this trail is mountain biking as an out and back or exiting via the La Sal Pass Road.

The Deep Creek Trail receives very little use as it dead ends at private property and does not access any points of interest.

#### *Southern Portion of the La Sals-*

Trails in this area include the South Mountain, Pole Canyon, Deer Canyon, Pack Creek and Hells Canyon Trails.

Most of the trails in this area are very steep and are less used than trails in other portions of the La Sals. No trail registers are located in this area so there is no data available on use. Judging from the types of use that Forest Service staff have seen on the trails during patrols and maintenance trips the majority of use is foot travel, with very little mountain bike use. The trails are occasionally used by mountain bikers, but the large amount of elevation gain limits most riders. The one exception is the Hell Canyon Trail that mountain bikes do use to drop down for La Sal Pass, but this trail is very steep and rocky and only used by advanced riders. Trails in the area are popular to access big game hunting areas in the fall.

### **Dispersed Recreation**

Off trail travel also occurs throughout the area primarily by hikers climbing to the high peaks or other points of interest and by big game hunters.

Motorized recreation with motorcycles, OHVs and UTVs is popular in the area along Forest Roads and designated motorized trails.

Dispersed camping is very popular along the Geyser Pass, Warner Lake, Oowah Lake and La Sal Pass Roads.

### **Special Recreation Permits, Outfitter and Guides/Recreation Events**

The Recreation Special Use Program is a large program in the project area with 37 total outfitters and guides authorized. The types of authorized use include; 5 shuttle companies, 10 mountain bike outfitter and guides, 3 motorized (jeeps, OHVs and motorcycles), 3 canyoneering/climbing guides, 6 hunting guides and 10 other guides offering various guided services.

Currently 11 Special Use Permits for recreation events are permitted for 2013 including mountain bike races, foot races, bike tours, and jeep tours.

In 2013 a Needs Assessment was completed for the Moab/Monticello Ranger District that set use limits on outfitter and guides. The Needs Assessment also broke the District into use areas to better manage commercial recreation use. The project area for this project contains the Geyser Pass and Moab Use Areas.

A moratorium on new shuttle and mountain bike guides was placed on the Geyser Pass Use Area until a carrying capacity is conducted to determine the appropriate level of commercial recreation use. The Moab Use Area is still currently open to new outfitter and guides

### **3.1.2 Environmental Effects (Recreation Opportunities)**

#### **3.1.2.1 Alternative 1 No Action**

Under this alternative 63.5 miles of non-motorized trail would remain open to all non-motorized users.

No additional trails or designation changes would be added and recreation opportunities would not change under this alternative.

Perceived social conflicts would not be resolved and may increase in some areas where trail use is expected to increase.

#### **3.1.2.2 Alternative 2 Proposed Action**

Under the Proposed Action 60 miles of existing non-motorized trails would be retained and 3.5 miles of the existing trail system would be removed from the system.

The 3.5 mile Deep Creek Trail would be removed from the system as the trail currently receives very little use and terminates in a dead end at a private property boundary with no public access. It is anticipated that no impact would occur to existing recreation opportunities as foot and horse use would still be allowed in the area.

The following trails would be changed from open to all non-motorized uses to open to foot and horse only;

- Mountain View Trail # 5185
- South Mountain/Pack Creek # 5075
- Portion of South Mountain # 5029
- Doe Canyon # 5100
- Pole canyon # 5035
- Portion of Warner/Beaver Basin  
# 5033

These trails currently receive very light use from mountain biking and are primarily used by foot and horse users. The designation change would impact mountain biking

opportunities by precluding their use on these trails, but judging by the current use on these trails, it would not be a major impact as other more popular trails would remain open to cycling and new trails would be designated under the Proposed Action. The designation changes would create areas that would allow users who are seeking a trail experience that would provide more solitude and/or a primitive/traditional experience to know where they could find those opportunities. These changes could also mitigate some of the social conflicts occurring on popular shared trails.

Several new trails (approx. 2.9 miles) would be designated that would be open to foot travel only:

- Mill Creek Overlook Accessible Trail- 0.1 miles
- Mill Creek Climbing Access Trails- 1.2 miles
- Brumley Creek Climbing Access Trail- 0.7 miles
- Brumley Arch Trail- 0.2 miles
- Mill Creek Alpine Loop- 0.7 miles

These trails are generally located in areas that are currently receiving hiking use to access climbing areas or to create a loop between two system trails. Designating, constructing and maintaining them will enhance those recreational opportunities while mitigating potential impacts to other resources. No impacts to other forms of recreation are anticipated from these trails.

Several new trails (approx. 7 miles) would be designated that would be open to foot and horse travel only:

- Pre-Laurel Peak- 1.8 miles
- Gold Basin- 1.9 miles
- Manns Peak Trail- 1.1 miles
- Mt Tuk Trail - 1.6 miles
- Gold Knob Trail- .6 miles

These trails are generally located in areas that are currently receiving hiking use and some horse use. Designating, constructing and maintaining them will enhance those recreational opportunities while mitigating potential impacts to other resources. No impacts to other forms of recreation are anticipated from these trails.

Several new trails (approx. 13.3 miles) would be designated that would be open to all non-motorized uses:

- Fisher Mesa Extensions- 1.5 miles
- Upper Schuman Trail-.3 miles
- Squaw Springs Exit-1.8 miles new /3.7 miles on road
- Terraces Trail-.8 miles
- Burlfriends Trail- 3.5 miles
- Shepherders Trail-.6 miles
- Medicine Lake Trail- 1.1 miles

The majority of these trails are located in areas that are currently receiving hiking, horse and/or mountain bike use. All of these trails except the Squaw Springs Exit and Medicine Lake are existing trails that are used for moving livestock to summer pasture or for other reasons. Designating, constructing and maintaining them will enhance those recreational opportunities while mitigating potential impacts to other resources. No impacts to other forms of recreation are anticipated from these trails.

There is potential for some of these new trails, in areas that currently receive very little recreational use, to have an impact on forms of primitive off trail recreation like cross-country hiking and hunting. Some of the proposed new trails in the Proposed Action could impact hunting opportunities in areas of the La Sals currently without trails. These impacts would be largely dependent on the amount of use the new trails receive.

The majority of the new trails would be located within the Roaded Natural and Semi-Primitive Motorized ROS classes. Approximately 1.4 miles of new trail open to foot and horse only would be located within a Semi-Primitive Non-Motorized Class and .25 miles would be located within a Primitive ROS Class. All of these trails would be consistent with the ROS classes.

The Proposed Action would also place a seasonal closure of July 1<sup>st</sup> for mountain biking on the Burro Pass and Moonlight Meadow trails. The closure would allow the trails time to completely dry out before mountain bikes started using the trails. In an average year, the trails are not completely dried out until around the 1<sup>st</sup> of July. It is not uncommon for portions of the Burro Pass trail to be snow covered well past July 1<sup>st</sup>, in heavy snow years. Even in below average years, the snow on Burro Pass lingers into late June. Snotel sites in the La Sal Mountains showed that the winter of 2012-2013 was at about 75% of average precipitation and field checks showed that large snowdrifts were still covering portions of the Burro Pass Trail on June 10<sup>th</sup>. This closure would not have a major impact on mountain biking opportunities in the area as other trails would be open during that time. Commercial shuttle operators would not be impacted either as they could still operate and drop off clients at the lower elevation accesses to the “Whole Enchilada”.

The Proposed Action would allow commercial shuttle operations in the entire La Sal Range, except for the La Sal Pass Area. Currently the La Sal Pass area receives very light use by commercial shuttle companies as it is a relatively long drive around to the back side of the mountain and the trails in the area are not conducive to shuttle use as they end a long way from Moab. Prohibiting commercial shuttle use in the area would maintain the trail use in the area as a relatively low use area as compared with the trails around Geyser Pass in the central portion of the La Sals. Maintaining the area as a lower use area would allow trail users who are seeking opportunities for less crowded experiences to continue to find those types of experiences in the La Sal Pass area. Prohibiting commercial shuttle use in the area would impact the ability of existing shuttle companies to expand their operations into the La Sal Pass area, but it is not anticipated that the prohibition would have an economic impact on the shuttle companies, as they are not currently using the area.

The Proposed Action would also change the designation of the 3.2 mile Carpenter Basin Trail to open to two-wheel motorized traffic. The Carpenter Basin Trail currently sees very little use and it is anticipated that opening it to motorcycles would not have a serious impact on non-motorized recreation in the area. Allowing motorcycles to use the trail could impact fall hunting in the area but if the trail were opened to motorcycles it would be closed from September 15<sup>th</sup> to April 15<sup>th</sup> to mitigate this potential impact.

### **3.1.2.3 Alternative 3 Increased Trail Opportunities**

Under Alternative 3, all of the 63.5 miles of existing non-motorized system trail would remain on the system. No impacts to recreation would occur from this action.

Under Alternative 3, use designations would not change and all of the existing system trails would remain open to all non-motorized uses. No impacts would occur to opportunities for mountain biking under this Alternative. Potential benefits of designating certain trails as foot and horse only to those seeking opportunities for solitude and/or primitive/traditional recreation (hiking and horseback) would not occur under this alternative.

Several new trails (approx. 3.1 miles) would be designated that would be open to foot travel only these trails include;

- Mill Creek Overlook Accessible Trail- .1 miles
- Mill Creek Climbing Access Trails- 1.2 miles
- Brumley Creek Climbing Access Trail- .7 miles
- Brumley Arch Trail- .2 miles
- Beaver Lake Interpretive Trail- .1 miles

- Pack Creek Interpretive Trail- .1 miles
- Mill Creek Alpine Loop- .7 miles

These trails are generally located in areas that are currently receiving hiking use to access climbing areas or to create a loop between two system trails. Designating, constructing and maintaining them will enhance those recreational opportunities while mitigating potential impacts to other resources. The Beaver Lake and Pack Creek Interpretive Trails and Mill Creek Overlook Trail are in areas that are not currently being used by hikers, but they would add several types of trail opportunities (interpretive and accessible) that are not currently available in the La Sals. No impacts to other forms of recreation are anticipated from these trails.

Several new trails (approx. 8.9 miles) would be designated that would be open to foot and horse travel only these trails include;

- Gold Basin Loop -.9 miles
- Pre-Laurel Peak- 1.8 miles
- Gold Basin- 1.9 miles
- Manns Peak Trail- 1.1 miles
- Mt Tuk Trail - 1.6 miles
- Gold Knob Trail- .6 miles
- Horse Mountain Trail- .7 miles
- Lackey Basin Extension- .3 miles

These trails are generally located in areas that are currently receiving hiking use and some horse use. Designating, constructing and maintaining them will enhance those recreational opportunities while mitigating potential impacts to other resources. Alternative 3 would provide more mileage of foot and horse only trail opportunities than the Proposed Action. No impacts to other forms of recreation are anticipated from these trails.

Several new trails (approx. 38.5 miles) would be designated that would be open to all non-motorized uses, these trails include;

- Jimmy Keen Flat Trails-7.7 miles
- Geyser Pass Single-track- 3.2 miles
- Top Shelf Trail- 4.4miles
- Enchilada Bypass -.3 miles
- Warner Lake Family Loop-1 mile
- Bald Mesa Loop-1.3 miles
- Needle in the Haystack 1.6 miles
- Geyser Pass to Burro- 1.4 miles
- Horse Creek to Geyser- 1 miles



- Bear Mountain Traverse-.8 miles
- Kane Springs Connection-3.5 miles
- Boren to Schumann- 2.7 miles
- Fisher Mesa Extensions- 1.5 miles
- Upper Schuman Trail-.3 miles
- Squaw Springs Exit-1.8 miles new /3.7 miles on road
- Terraces Trail-.8 miles
- Burlfriends Trail- 3.5 miles
- Shepherders Trail-.6miles
- Medicine Lake Trail- 1.1miles

Some of these trails are located in areas that are currently receiving hiking, horse and/or mountain bike use others are completely new trails into areas that are currently receiving very little recreation use. This alternative would provide the most opportunities for recreational trail use of all the alternatives. This alternative would also add more intermediate type biking trails that other alternatives.

The Enchilada Bypass, Warner Lake Family Loop, and Upper Schumann's trails would provide alternate trails for downhill mountain bike traffic along the popular "Whole Enchilada" trail and would mitigate some of the social conflicts currently occurring during certain times on the trail. The Geyser Pass Single-track and Geyser to Burro Trails would take recreationists off the busy Geyser Pass Road and make the experience safer. The Jimmy Keen Flat trails would be the only "Stacked Loop" Trail experience on the District and would add almost 8 miles of intermediate level trails to the District. Other proposed trails would provide new loop and connectors and allow for a variety of new trail opportunities. Designating, constructing and maintaining them will enhance recreational opportunities while mitigating potential impacts to other resources.

There is potential for some of these new trails that are in areas that currently receive very little recreational use to have an impact on forms of primitive off trail recreation like cross-country hiking and hunting. Some of the proposed new trails in this alternative could impact hunting opportunities in currently trail less areas of the La Sals. These impacts would be largely dependent on the amount of use the new trails receive.

The majority of the new trails would be located within the Roaded Natural and Semi-Primitive Motorized ROS classes. Approximately 3 miles of new trail open to foot and horse only would be located within a Semi-Primitive Non-Motorized Class and .5 miles would be located within a Primitive ROS Class. Under alternative 3 approximately .3 miles of the Top Shelf Trail which would be open to all non-

motorized uses would be located within the Primitive ROS class. All of these trails would be consistent with the ROS classes.

Alternative 3 would also place a seasonal closure based on trail conditions for mountain biking on the Burro Pass and Moonlight Meadow Trails. The closure would allow the trails time to completely dry out before mountain bikes started using the trails. On average years the trails are not completely dried out until around the 1<sup>st</sup> of July. It is not uncommon for portions of the Burro Pass trail to be snow covered well past July 1<sup>st</sup>, on heavy snow years. Even on below average years the snow on Burro Pass lingers into late June. Snotel sites in the La Sal Mountains showed that the winter of 2012-2013 was at about 75% of average precipitation and field checks showed that large snow drifts were still covering portions of the Burro Pass Trail on June 10<sup>th</sup>. This closure would not have a major impact on mountain biking opportunities in the area as other trails would be open during that time. Commercial shuttle operators would not be impacted either as they could still operate and drop off clients at the lower elevation accesses to the “Whole Enchilada”. The closure based on trail conditions would have less of a potential impact to recreational trail use than the closure based on a fixed date as it would allow for a more flexible opening time and could allow for a longer season if the conditions allow.

Alternative 3 would allow commercial shuttle operations in the entire La Sal Range. This could result in a higher level of use on trails throughout the range as the potential for commercial shuttle use on all trails would continue to exist.

#### **3.1.2.4 Alternative 4 Increased Recreation Restrictions**

Under Alternative 4, 57.7 miles of existing non-motorized trails would be retained and 5.8 miles of the existing trail system would be removed from the system.

The 3.5 mile Deep Creek Trail and 2.3 mile Bachelor Basin Trail would be removed from the system. The Deep Creek Trail currently receives very little use and the Bachelor Basin Trail crosses sections of private lands. Removing the Deep Creek Trail would have little impact to recreation opportunities. Removing the Bachelor Basin Trail could impact users accessing the northern portion of the range. Several public comments were made in regards to the potential closure of the Bachelor Basin Trail stating that they use the trail to access the range on horseback and removal of the trail would essentially preclude their access.

Alternative 4 would change the designation of 24.6 miles of existing system trails from open to all non-motorized uses to open to foot and horse only. The designation changes would occur on the following trails.

- *Portion of Deep Creek # 5101*

- *Miners Basin #040*
- *Bachelor Basin #034*
- *Mountain View Trail # 5185*
- *South Mountain/Pack Creek # 5075*
- *Portion of South Mountain # 5029*
- *Doe Canyon # 5100*
- *Pole canyon # 5035*
- *Hell Canyon Trail #039*
- *Portion of Warner/Beaver Basin # 5033*

The majority of these trails currently receive very light use from mountain biking and are primarily used by foot and horse users. The exception being the Hell Canyon Trail, which is beginning to become popular with mountain bikers. The designation changes would impact mountain biking opportunities by precluding their use on these trails, but judging by the current amount of use on these trails it would not be a major impact. This alternative would have the greatest impact on opportunities for mountain biking. The designation changes would create areas that would allow users who are seeking a trail experience that would provide more solitude and/or a primitive/traditional experience, to know where they could find those opportunities. This alternative could mitigate some of the social conflicts occurring on popular shared trails.

This alternative would add a total of 6 miles of new trails (4 miles open to foot and horse, and 2 miles open to foot only):

*Open to foot and horse only*

- *Manns Peak Trail-1.1 miles*
- *Mt Tuk Trail -1.6 miles*
- *Gold Knob Trail- .6 miles*
- *Shepherders Trail-.6 miles*

*Open to foot only*

- *Mill Creek Overlook Accessible Trail- .1 miles*
- *Mill Creek Climbing Access Trails- 1.2 miles*
- *Brumley Creek Climbing Access Trail- .7 miles*

These trails are generally located in areas that are currently receiving hiking use to access climbing areas or to create a loop between two system trails. Designating, constructing and maintaining them will enhance those recreational opportunities while mitigating potential impacts to other resources. No impacts to other forms of recreation are anticipated from these trails.

The majority of the new trails would be located within the Roaded Natural and Semi-Primitive Motorized ROS classes. Approximately .1 miles of new trail open to foot

and horse only would be located within a Semi-Primitive Non-Motorized Class and .25 miles would be located within a Primitive ROS Class. All of these trails would be consistent with the ROS classes.

Alternative 4 would also enforce a seasonal closure until July 1<sup>st</sup> for mountain biking on the Burro Pass and Moonlight Meadow Trails. The closure would allow the trails time to completely dry out before mountain bikes started using the trails. In an average year, trails are not completely dried out until around the 1<sup>st</sup> of July. It is common for portions of the Burro Pass trail to be snow covered well past July 1<sup>st</sup>, in heavy snow years. Even in below average years the snow on Burro Pass lingers into late June. Snotel sites in the La Sal Mountains show that the winter of 2012-2013 was at about 75% of average precipitation and field checks show that large snowdrifts were still covering portions of the Burro Pass Trail on June 10<sup>th</sup>. This closure would not have a major impact on mountain biking opportunities in the area, as other trails would be open during that time. Commercial shuttle operators would also not be impacted as they could still operate and drop off clients at the lower elevation accesses to the “Whole Enchilada”.

Alternative 4 would allow commercial shuttle operations in the entire La Sal Range, except for the La Sal Pass Area. Currently the La Sal Pass area receives very light use by commercial shuttle companies as it is a relatively long drive to the back side of the mountain. Trails in this area are not conducive to shuttle use as they end a long way from Moab. Prohibiting commercial shuttle use in the area would maintain trail use in the area as a relatively low use area as compared with the trails around Geyser Pass in the central portion of the La Sals. Maintaining the La Sal Pass area as a lower use area would allow trail users who are seeking opportunities for less crowded experiences to continue to find those types of experiences. Prohibiting commercial shuttle use in the area would impact the ability of existing shuttle companies to expand their operations into the La Sal Pass area, but it is not anticipated that the prohibition would have an economic impact on the shuttle companies, as they are not currently using the area.

## **3.2 Issue #2- Effects of Proposed Action on Wildlife Resources**

**Issue- The Proposed Action would designate new trails that would impact wildlife and wildlife habitat in the La Sals**

This section incorporates by reference the “*Wildlife Report on Manti-La Sal National Forest Management Indicator Species And Migratory Birds for the Moab No-*

*Motorized Trail Project EA*” and the “*Biological Evaluation and Biological Assessment for the Moab Non-Motorized Trails EA*”. These documents contain the detailed data, methodologies, analyses, conclusions, maps, references, and technical documentation that the District Wildlife Biologist relied upon to reach the conclusions in the EA and are available in the Project Record. These documents analyze the impacts of the Proposed Action and Alternatives on several different categories of wildlife including;

***Threatened and Endangered Species (T&E)***

Federal agencies are mandated to analyze effects of proposed federal actions on T&E species according to the Endangered Species Act of 1973. To meet this requirement, a biological assessment (BA) for species known to occur or which may occur in the analysis area has been prepared by the District Biologist. U.S. Fish and Wildlife Service (USFWS) concurrence is not required due to the No Effect determinations.

***Sensitive Species***

The Forest Service is required to analyze the effects of proposed projects on USFS Intermountain Region (Region 4) sensitive species. The Biological Evaluations (BE) identifies sensitive species which may occur on the Moab Ranger District, and analyzes the effects of the proposed action and alternatives on these species.

***Management Indicator Species and Migratory Birds***

Indicator species for the Manti-La Sal National Forest (1986) are deer and elk, golden eagle, northern goshawk, Abert’s squirrel and macroinvertebrates. A variety of migratory birds, including several species of interest, occur in riparian, forested and mountain brush habitats in the project area.

A summary of the affected environment and potential impacts to each of these categories is found below.

### **3.2.1 Affected Environment (Wildlife Resources)**

#### **THEATENED AND ENDANGERED SPECIES**

***Wildlife-***

**Mexican Spotted owl** - Mexican spotted owls (MSO) are not expected to occur in the project area, and there is no designated critical habitat. There is scattered modeled foraging and breeding/roosting habitat, but mostly on cliffs which do not meet the definition of canyon habitat or have the necessary primary constituent elements. All potentially suitable areas have been surveyed in past with no owls found. No Effect to MSO.

**California condor** – Condors may occur incidentally in or near the project area. The project area is 130 miles from the release site, and condors only occur regularly in Utah in Zion National Park. The project area is outside the designated

experimental population area (USFWS 1996), and not contain suitable habitat. No Effect to California condor.

**Southwestern willow flycatcher** - The southwestern willow flycatcher (SWWF) is a riparian obligate species, nesting in dense clumps of willow or shrubs with similar structure (alder, some tamarisk) along low-gradient streams, wetlands, beaver ponds, wet meadows and rivers. While there are perennial streams in the project area, and limited potential or suitable riparian habitat, the project area is outside the known range for the species and breeding is not expected. There would be no downstream effects to potential habitat along the Colorado River from the trail project. No effect to SWWF.

**Black-footed ferret** - The black-footed ferret depends exclusively on prairie dog colonies for food and shelter. There is no occupied prairie dog habitat in the project area. No effect to black-footed ferret.

**Yellow-billed cuckoo** - This neotropical migrant requires dense, deciduous riparian woodlands for breeding, generally in tall, old-growth cottonwoods and willows in at least 25-acre patches. There is limited cottonwood habitat along the drainages in the project area, and no large areas suitable for cuckoos. The yellow-billed cuckoo is not expected to occur in or near the project area. No effect to yellow-billed cuckoo.

**Gunnison sage-grouse, greater sage-grouse** – The project area is outside the known range of these candidate species; and no occupied habitat would be affected. There is no suitable sagebrush habitat in the project area.

#### ***Fish-***

**Colorado River fish** (bonytail, humpback chub, Colorado pikeminnow, razorback sucker) do not occur on the Manti-La Sal National Forest (MLNF), but are present in drainages that receive water originating on the MLNF. The project area is located more than 10 miles from the Colorado River. There are no water depletions associated with the project, and there is no effect to these species.

**Greenback cutthroat trout** – This species is known to occur only in Beaver Creek on the south side of the La Sal Mountains. No trails are proposed in the drainage on NFS lands, although the proposed Shepherders Trail connects onto state land in the upper portion of the drainage occupied by these native trout. There are no direct or indirect impacts to greenback cutthroat trout or their habitat, including water quality or quantity, from the proposed non-motorized trails on National Forest land.

#### ***Plants-***

**Jones cycladenia** – This small wildflower grows in gypsiferous soils that are derived from the Summerville, Cutler and Chinle formations, at elevations of 4400 – 6000 feet. It has not been located on the district, or adjacent to the Forest boundary in Castle Valley. There is no effect to Jones cycladenia.

**Navajo sedge** - This sedge grows in seeps and springs on vertical cliffs of Navajo sandstone at elevations between 5,000 and 5,900 feet. Critical habitat is on the Navajo reservation. No known populations exist on the Moab-Monticello Ranger District, and this species will not be analyzed further in this document. There is no effect to Navajo sedge.

## **SENSITIVE SPECIES**

### ***Wildlife –***

**Spotted bat** – The spotted bat uses a variety of vegetation types from approximately 2500 to 9500 feet in elevation, including riparian, desert shrub, ponderosa pine, montane forests and meadows. Spotted bats roost in rock crevices high up on steep cliff faces. They have been observed in the project area, and their critical roosting habitat may be impacted by project actions. There is no measurable difference between the alternatives for this species.

**Western Big-eared bat** – Western big-eared bats roost and hibernate in complex caves and mines. There is suitable roosting habitat in the canyons and associated with abandoned mines. Western big-eared bats may forage over the area. Any suitable roosting habitat within the project area would not be impacted by the development or use of non-motorized trails in the project area. There are no impacts to this species from the proposed action or alternatives.

**Bighorn sheep** – Bighorn sheep occur near the district only in the Colorado River Canyon, approximately 10 miles from the project area. They are unlikely to occur. This species will not be analyzed further.

**Bald eagle** – Bald eagles occur in the project area only as migrants/transients, often soaring high over the mountains. The nearest known nest area is along the Colorado River northeast of Moab, a distance of more than 30 miles. Winter use occurs along the Colorado River. There would be no impact to bald eagles from project activity.

**Northern Goshawk** – Goshawks occur in aspen, mixed conifer and ponderosa pine forest communities on the La Sal Mountains. Suitable habitat (mature dense forest stands) and nesting territories occur in the project area, along with prey species (birds and small mammals). Extensive surveys did not locate any new territories along proposed trail routes, but existing territories are considered in relation to proposed trails.

**Peregrine falcon** - Suitable nesting/roosting cliffs and associated canyon riparian foraging habitat occur in the project area. There are occupied territories in the project area, and potential disturbance effects to nesting peregrine falcons from the proposed action and alternatives.

**Flammulated Owl** - This small owl inhabits mature mixed pine, aspen and second growth ponderosa pine forests. Suitable nesting (tree cavities) and foraging habitat occurs in the project area. The proposed trails would not directly impact nesting habitat, and current and proposed activities are unlikely to disturb/displace the nocturnal, cavity-nesting species.

**Three-toed Woodpecker** - Three-toed woodpeckers occur in the project area, predominately in mature spruce-fir forests with bark beetle activity. The project area contains suitable nesting ( $\geq 12$ " diameter snags) and foraging habitat (bark beetle larvae in recently killed trees). Non-motorized trails would not impact nesting or foraging habitat, but may indirectly cause disturbance to individuals in occupied habitat.

***Fish-***

**Colorado River cutthroat trout** - Originally thought to be in La Sal Creek and Deer Springs, no recent populations have been found. It is addressed with greenback cutthroat trout as a native trout in the drainages where either has the potential to occur.

***Plants-***

**La Sal daisy** – This species is common in alpine turf habitat above timberline in the La Sal Mountains. There are populations in areas proposed for new designated trail routes.

**Abajo Peak draba** - The Abajo Peak draba grows in conifer forests and subalpine meadows at 6400-12,500'. It is found in timberline- alpine habitats in the project area, in areas where new routes are proposed.

**Sweet-flowered rock-jasmine** - This species is found in rocky alpine habitat above timberline in the La Sal Mountains. There are populations in areas proposed for new designated trial routes.

**Canyonlands lomatium** - Canyonlands lomatium occurs in association with Entrada sandstone outcrops in the pinyon-juniper vegetation type between 5,000 and 7,000 feet in elevation. A small population occurs in the Meloy Park area, but is not known from the project area. It will not be considered further in this analysis.

**Isely's milkvetch** – This species is associated with Mancos shale soils on the lower slopes on the west side of the La Sal Mountains. No trails directly impact the occupied habitat.

**MANAGEMENT INDICATOR SPECIES - (MIS)**

**Mule deer and Rocky Mountain elk** are an indicator of early succession forest, brush, sagebrush and grass habitats. Habitat, including winter range, summer range



and fawning/calving areas, is found throughout the project area. Summer range has been considered the limiting factor for big game animals due to a limited availability of high elevation range in proportion to the quantity of low elevation winter ranges available to the herds in southeastern Utah. Particular concerns exist for big game (elk, deer) security during critical life stages such as calving and fawning.

In addition, due to the vulnerability and stress on animals in winter, winter range is also crucial habitat for their survival

The project area contains 3421 acres of the area classified as general winter range on the Moab portion of the District in the Forest Plan (USDA Forest Service 1986). There are also 23,976 acres identified as crucial elk winter range by the Utah Division of Wildlife Resources (2006), which is 33% of the elk winter range on the Moab portion of the District. The most crucial big game habitat component in the project area is summer range. There are 65,245 acres of deer summer range, 48% of the summer range on the district. Seventy percent, 40,013 acres, of the elk summer range on the district is in the project area. Important deer fawning and elk calving areas are also impacted by the non-motorized trail proposal.

**Golden eagles** may use most vegetative types for foraging, and nesting areas include undisturbed cliff habitat in the project area.

**Northern goshawks** are an indicator of mature conifer, mixed conifer and aspen forest habitat. Suitable and occupied habitat occurs in the project area. Sensitive to disturbance in their nest area, increased human activity from trails has the potential to affect nesting activity and reproductive success. There are differences between the alternatives in potential effects to goshawks and their habitat.

**Abert's squirrel** is the indicator species most directly dependent on ponderosa pine habitat on the Moab/Monticello district. Trails/recreation is not indicated as a factor affecting Abert's squirrels or their primary habitat components.

**Macroinvertebrates** are benthic organisms including aquatic insects, mollusks and worms, and are an indicator in aquatic habitats. Trails may affect water quality, but proper construction, maintenance and seasonal restrictions can serve to limit trail-related erosion/siltation to streams. Macros are not a suitable indicator species for the trail project

### **3.2.2 Environmental Effects (Wildlife Resources)**

#### **Effects in all Alternatives**

No effects are expected to wildlife/fish/plant habitat features such as forest age-class structure, vigor or composition (largely aspen/mixed conifer and spruce-fir), snags, rocky slopes, cliffs, or cave/mine habitat features. The habitat fragmentation effect from non-motorized trails is less than from roads, but may impact some species use of areas depending on topography, cover, and the level of human use. Impacts to wildlife are related to disturbance, displacement or increased mortality of

populations in areas near trails in relation to trail use and associated human activities. The trails and the amount and frequency of their use can impact wildlife due to disturbance during critical life stages, compromised security, and/or impacts to habitat. Trails in otherwise remote areas are passable for crossing by most animals and thus have little effect on movement patterns except in locations where development and trail density are relatively great. Potential impacts to sensitive plants are from trail construction, maintenance and use through direct disturbance/trampling of individuals, effects to soil and hydrology. Trail location and design can minimize the adverse effects from new trails, and may also reduce off-trail travel and associated travel that is currently occurring without designated routes.

Specific impacts to the MIS that were deemed most relevant are found below. Detailed analysis of impacts to other MIS and other categories of wildlife can be found in the “*Wildlife Report on Manti-La Sal National Forest Management Indicator Species And Migratory Birds for the Moab Non-Motorized Trails Project EA*” and the “*Biological Evaluation and Biological Assessment for the Moab Non-Motorized Trails EA*”.

### **3.2.2.1 Alternative 1 No Action**

#### **Direct/Indirect Effects**

Under this alternative, no changes to the Moab District trail system would occur and existing conditions would continue. There would be 63.5 miles of non-motorized trails open to recreationists. The current mileage and density of trails in wildlife habitat would remain and likely increase as unauthorized routes continue to be used. Current conditions of trails and their influence on wildlife habitat quality and levels of disturbance would continue.

#### **Specific Impacts to Deer and Elk (Management Indicator Species) of the No Action Alternative**

There would be no change to existing condition regarding trails in the project area. At the current trail density trails and level of use, deer and elk still use habitats on the west side of the La Sal Mountains.

#### **Specific Impacts to Northern Goshawk (Management Indicator Species) of the No Action Alternative**

There would be no change to existing condition regarding trails in the project area. At the current trail density trails and level of use, including on user-created trails, northern goshawks still use habitats on the west side of the La Sal Mountains. Under the No Action Alternative, the population of northern goshawk on the Moab District is expected to remain similar to current levels and trends.

### **3.2.2.2 Alternative 2 Proposed Action**

#### **Direct/Indirect Effects**

Most of the existing trails would be kept on the system, and 21 miles of new trails added. The seasonal restrictions on specific trails and the closure of La Sal Pass to commercial shuttle operations would benefit wildlife.

#### **Specific Impacts to Deer and Elk (Management Indicator Species) of the Proposed Action**

Under the Proposed Action, 60 miles of existing trails would be retained in the trail system. The closure of the Deep Creek trail is beneficial to elk calving habitat security. The changes in trail designation would generally be beneficial, as the change to motorized use on the Carpenter Basin trail is mitigated by the seasonal closure and the restrictions on bike use in the South Mountain area makes a large area of secure habitat for big game. Other seasonal restrictions, while not in prime fawning/calving habitat, also benefit big game and their habitat. A total of 21.4 miles of new trails would be added to the system; 19.3 miles in deer summer range and 12.5 miles in elk summer range. The proposed hiking only trails are in close proximity to roads and heavily used areas, and do not add additional impacts to high-value habitat. The high elevation, hiking/horse trails would have a greater impact as they fragment existing large blocks of high-quality secure habitat. The proposed 14 miles of bike trails include three that may impact habitat use; Squaw Springs exit, Terraces and Medicine Lake. Impacts from these trails could be reduced by the restriction on commercial use in the La Sal Pass area.

Disturbance to deer and elk from recreational trail activities may impact the distribution and habitat use by big game, but no impacts to the population are expected. Under Alternative 1, populations of deer and elk on the Moab District are expected to remain similar to current levels and trends.

#### **Specific Impacts to Northern Goshawk (Management Indicator Species) of the Proposed Action**

Under the Proposed Action, 60 miles of existing trails would be retained in the trail system. The closure of the Deep Creek trail would reduce potential impacts in suitable goshawk nesting habitat. The changes in trail designation would generally be beneficial by reducing levels of disturbance in goshawk habitat. Other seasonal restrictions also benefit goshawk nesting activity. A total of 21.4 miles of new trails would be added to the system; 1.4 miles in goshawk PFAs and 7.4 miles in suitable forested habitat not known to be occupied by goshawks at the current time. The proposed hiking only trails are in close proximity to roads and heavily used areas,

and do not add additional impacts to high-value habitat. The proposed trails with the most potential to impact goshawks are Terraces, Medicine Lake, Burlfriends and Gold Basin. Impacts from these trails could be reduced by the restriction on commercial use in the La Sal Pass area.

Disturbance to northern goshawks from recreational trail activities may impact habitat use and reproductive success, but the trails will be routed to minimize disturbance to existing nest areas. No impacts to the Forest-wide population are expected. Under the Proposed Action, the population of northern goshawk on the Moab District is expected to remain similar to current levels and trends.

### **3.2.2.3 Alternative 3 Increased Trail Opportunities**

#### **Direct/Indirect Effects**

This alternative has the most miles of trails proposed, and the most potential to impact wildlife.

#### **Specific Impacts to Deer and Elk (Management Indicator Species) of the Alternative 3**

In addition to the existing trail network, 50 miles of new trails would be added. This alternative has the greatest impact on all types of big game range, and no mitigation (seasonal or commercial use restriction) is included. The proposed trails reduce elk habitat security by 9% from the existing condition. Total trail density in elk summer range would increase from 0.81 mi/mi<sup>2</sup> to 1.4 mi/mi<sup>2</sup>.

The proposed trails in the Jimmie Keen Flat area may adversely affect elk use of the winter range, displacing them onto private land.

Disturbance to deer and elk from recreational trail activities may impact the distribution and habitat use by big game to a greater degree than under existing conditions. With no mitigation on the increased use under Alternative 3, there would be impacts to deer and elk use of NFS lands, although impacts to population trends would be difficult to distinguish from other factors, including hunting. Overall populations of the deer and elk herds on the La Sal herd unit would be expected to remain the same.

#### **Specific Impacts to Northern Goshawk (Management Indicator Species) of Alternative 3**

In addition to the existing trail network, 50 miles of new trails would be added. This alternative has the greatest impact on goshawk territories and suitable forested habitat, and no mitigation (seasonal or commercial use restriction) is included. Trails in goshawk PFAs would increase by 3.5 miles, and in suitable forested habitat by 9.6 miles.

The proposed trails in this alternative with the most potential to impact goshawks are the same as the Proposed Action: Terraces, Medicine Lake, Burlfriends and Gold Basin. In addition, the trails Gold Basin Loop, Boren Mesa, Geyser Pass-Burro, Horse Cr-Geyser, Needle in the Haystack, Peale Blue Ribbon, Squaw Springs exit and Top Shelf are all in optimum goshawk nesting/foraging habitat. The Horse Creek-Geyser trail would have extensive impacts on an existing goshawk nesting territory, as would the Boren Mesa, Needle in the Haystack and PBR trails due to the way they intersect optimum habitat.

Disturbance to northern goshawks from recreational trail activities in alternative 3 would impact habitat use and reproductive success more than the other alternatives. There may be impacts to individual birds, but no large-scale impacts to habitat structure are involved, so no impacts to the Forest-wide population are expected. Under Alternative 3, the use of certain areas by goshawks may be reduced, impacting the current population level and trends on the Moab District.

#### **3.2.2.4 Alternative 4 Increased Recreation Restrictions**

##### **Direct/Indirect Effects**

The increased trail restriction alternative has the least amount of trails in all habitat types considered, and the least potential to impact wildlife.

##### **Specific Impacts to Deer and Elk (Management Indicator Species) of the Alternative 4**

The existing trail network would be reduced by approximately 6 miles, including in elk calving habitat in Deep Creek. Six miles of trails would be added to the system, but these are non-mechanized only. Over 25 miles would be changed to open to foot and horse only, reducing trail-related disturbance to elk over large areas on South Mountain and on the northern portion of the range. Compared to alternative 3, the miles and density of trails in deer and elk summer range are substantially reduced, with a density of 0.87 mi/mi<sup>2</sup> in elk summer range. The acreage of secure elk habitat is less than in the No Action alternative, but more than the other action alternatives. There are no individual trails in this alternative which stand out as having impacts to deer or elk habitat.

Disturbance to deer and elk from recreational trail activities is reduced under alternative 4, and no adverse impacts to big game populations or trends are expected.

##### **Specific Impacts to Northern Goshawk (Management Indicator Species) of Alternative 4**

The existing trail network would be reduced by approximately 6 miles, including in goshawk habitat in Deep Creek and Bachelor Basin. Trail mileage in goshawk PFAs would be reduced by 0.5 miles. Six miles of trails would be added to the system, but these are non-mechanized only. Over 25 miles would be changed to open to foot and

horse only, reducing trail-related disturbance to goshawks over large areas on South Mountain and on the northern portion of the range. Compared to alternative 3, the miles and density of trails in suitable nesting habitat are reduced, but still has a density of 1.2 mi/mi<sup>2</sup> in suitable forested habitat. There are no individual trails in this alternative which stand out as having impacts to specific goshawk habitat areas.

Disturbance to northern goshawk from recreational trail activities is reduced under alternative 4, and no adverse impacts to populations or trends are expected.

### **3.2.2.5 Cumulative Effects**

Cumulative effects would be similar between all the alternatives. Continuing recreational activities on NFS and adjacent BLM lands occur with the proposed project. Recreational use of the designated routes may increase. Livestock grazing also occurs in the area, but does not have similar impacts as trails and recreation activities. The vegetative treatments on NFS lands that may add cumulatively to effects from the proposed project include commercial timber sales, hazardous fuels projects and prescribed burning through influences on habitat suitability and wildlife use of those habitats.

## **3.3 Issue #3- Effects of Proposed Action on Riparian Resources**

The effects of the Proposed action on riparian resources was identified as an issue during the NEPA process. The effects of each of the alternatives on riparian resources are analyzed in detail in this section.

This section incorporates by reference the “*Moab Non-Motorized Trail Hydrology Report*” in the Project Record. That document contains the detailed data, methodologies, analyses, conclusions, references, and technical documentation that the District Hydrologist relied upon to reach the conclusions in the EA.

### **3.3.1 Affected Environment (Riparian Resources)**

The proposed project is located on most aspects of the La Sal Mountain Range. This means that trails associated with the action alternatives are spread out amongst thirteen sixth level subwatersheds, the accepted watershed analysis area for most Forest Service projects. Table 9 lists the thirteen subwatersheds by river basin.

**Table 9. Subwatersheds**

<b>River Basin</b>	<b>6<sup>th</sup> Level Subwatersheds</b>
Colorado River	Professor Creek, Castle Creek, Placer Creek, North Fork Mill

Basin	Creek, Horse-Mill Creek, Upper Pack Creek, Kane Springs Creek, Muleshoe Canyon, West Coyote Creek
Dolores River Basin	Beaver Creek, Roc Creek, Geyser Creek, Deer Creek-La Sal Creek

For many of the trails, there were no watershed concerns due to the location and lack of riparian/stream/wetland features. In some cases the proposed action for the trail, such as a change in use designation, was not a concern for watershed health. The analysis area for direct, indirect and cumulative effects will include only the subwatersheds where there were stream and wetland concerns. These subwatersheds include:

- Horse-Mill Creek and Upper Pack Creek subwatersheds in the Colorado River Basin, and,
- Geyser Creek and Deer Creek-La Sal Creek subwatersheds within the Dolores River Basin.

### **3.3.2 Environmental Effects (Riparian Resources)**

At the watershed scale, it is unlikely that differences between the alternatives could be measured for municipal watersheds, Moab's Sole Source Aquifer, or water quality. Additionally, trail design and mitigation would be applicable to all action alternatives. Therefore all alternatives comply with the Clean Water Act, the Safe Drinking Water Act, and EPAs Sole Source Aquifer designation.

Wetlands, springs and floodplains were identified as the key issues for analysis. Therefore, the following alternative comparison will focus on differences between alternatives for wetlands/springs/streams and compliance with Executive Orders (EO)11988, 11990, and Forest Plan Standards.

Trails can have indirect and direct impacts on wetlands. If a trail is located close to a wetland, sediment can wash from the trail into the wetland. Over time, the wetland would fill with sediment and become degraded. If a trail is routed through a wetland without proper construction and maintenance, the trail would entrench and drain the wetland. Springs and associated spring brooks are similarly affected by poorly or improperly designed and located trails. When trails are highly connected to streams, i.e. located closely adjacent to streams including many crossings, the risk of sediment delivery to the stream network is increased. Also, crossings that are poorly designed or located in sensitive stream types can increase the likelihood of channel instability (Forest Plan Standard F00-02). However, the design and layout of the trail can mitigate many wetland, spring and stream issues. How well risks are mitigated is captured in the Table 10.

**Table 10. Potential Impacts of Specific Trails and Alternatives**

Trail	Alternative	Risk of Impact to	Trail Design/Layout Criteria and
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		<b>Wetlands, Springs, Streams</b> (including trail design and layout described in adjoining column)	<b>Mitigation Measures</b>
Sheepherders	Proposed Action, 3, 4	High risk Trail would cross large wetland with existing livestock issues.	Wetland would require a ~450 foot turnpike. Difficult to maintain given livestock uses in the area. Work closely with Hydrologist for turnpike location/specifications. Small drainage would require hardened crossing.
Gold Basin	Proposed Action, 3	High risk Due to density of wetlands and corresponding lack of dry/constructible trail location at upper end.	To some extent, the trail can be located away from wetlands, springs and the creek. Stream crossings can be hardened or in some areas bridged. Work closely with Hydrologist for Trail alignment and stream and spring brook crossing locations.
Needle in the Haystack	3	High risk Due to the sensitive wet meadow and density of springs/wetlands along bench combined with current livestock uses.	Wet meadow along wet fork of Mill would require a turnpike. To the extent possible, trail would be routed to buffer springs/wetlands. Wet Fork Mill Creek would require a hardened crossing or bridge. Work closely with Hydrologist for Trail alignment and stream and spring brook crossing locations.
Geyser Single track	3	High risk Due to multiple springs and spring brooks along proposed trail location combined with proposed activity.	Spring crossings would be bridged or turnpike. Horse Creek crossings would be hardened or bridged. Work closely with Hydrologist for Trail alignment and spring brook crossing locations and specifications.
Burfriends	Proposed Action, 3	Moderate risk Due to the density of wetlands and drainage crossings.	Crossings of drainages would be bridged. Trail location would buffer wetlands.
Top Shelf	3	Moderate risk Due to density of springs and current livestock uses.	Trail would be routed to buffer wetlands. Trail would be routed to buffer springs. Spring brook crossings would be hardened.
Boren to Schumann	3	Moderate risk Due to the density of springs along lower bench and livestock uses.	Mill Creek would require a bridge. Trail location would buffer wetlands. Hardened crossings of spring brooks could be necessary
Geyser Pass to Burro	3	Moderate risk Due to crossing of spring brook	Trail would be routed to buffer wetlands. Trail would be routed to avoid the large spring. Spring brook and Burro Pass Creek crossings would be hardened.
Brumley Arch	Proposed Action, 3, 4	Moderate risk Due to steep slope down to Brumley Creek	Trail construction with switchbacks and water bars would reduce sediment delivery to Brumley Creek.
Brumley	Proposed	Low risk	Trail construction would require switchbacks/



Creek Climbing Access	Action,3, 4		additional drainage
Fisher Mesa Extensions	Proposed Action, 3	Low risk	
Horse Creek to Geyser	3	Low risk	Horse Creek crossing would be hardened
Moonlight Meadows	Proposed Action, 3, 4	Low risk Due to proposed action	
Terraces	Proposed Action, 3	Low risk	Trail construction would require increased drainage to compensate for clay soils
Medicine Lake	Proposed Action, 3	Low risk	

With the incorporation of trail design/layout criteria and mitigation measures and proper trail maintenance, all action alternatives would comply with EO 11988 and 11990 as well as the Manti-La Sal Forest Plan standards. However, the alternatives can be ranked from lowest risk of wetland/spring/stream impacts to highest as follows: no action, Alternative 4, Proposed Action, and Alternative 3.

### **3.3.2.1 Cumulative Effects**

The watershed analysis area including sixth level subwatersheds (Horse – Mill Creek, Upper Pack Creek, Deer – La Sal Creek and Geyser Creek) have similar uses. The activities that overlap in time and space include: livestock grazing, roads, dispersed camping, timber management, to name a few. Although the majority of Horse-Mill Creek and Upper Pack Creek are Forest Service lands, most of Geyser Creek Watershed is private and state owned lands. A large portion of Deer-La Sal Creek Watershed is State owned lands. A trail network has been developed in the state owned lands in the Deer-La Sal Creek area, including motorized trails. Some of these trails lead to Forest Service lands.

Many of the new proposed trails are located along existing livestock trails. This could present challenges in managing conflicts between competing uses as well as layering additional uses into sometimes already heavily used areas. For example, the proposed Shepherders Trail is an existing livestock trail cutting through a wetland. Care would have to be taken in reconstructing and maintaining the trail so that it could withstand additional traffic without further damage to the wetland.

The alternatives can be ranked in order of cumulative watershed effects based on the number of new additional trails in the following order: No Action, Alternative 4, Proposed Action and Alternative 3.

## **3.4 Issue #4- Effects of Proposed Action on Roadless and Wilderness Character**

The effects of the Proposed Action on roadless and wilderness character was identified as an issue during the NEPA process. The effects of each of the alternatives on the roadless and wilderness character of affected IRAs and Unroaded and Undeveloped Areas are analyzed in detail in this section.

This section incorporates by reference the “*Moab Trail Project Wilderness Attribute and Roadless Character Worksheet*” in the Project Record.

### **3.4.1 Affected Environment (Roadless and Wilderness Character)**

Roadless and wilderness character is defined using the following qualities

#### **Untrammeled**

This quality monitors modern human activities that directly control or manipulate the components or processes of ecological systems.

#### **Undeveloped**

This quality monitors the presence of structures, construction, habitations, and other evidence of modern human presence or occupation.

#### **Naturalness**

This quality monitors both intended and unintended effects of modern people on ecological systems inside wilderness since the time the area was designated.

#### **Outstanding Opportunities for Solitude**

Described as opportunities to experience solitude, or the isolation from the sights and sounds of management activities inside wilderness, the presence of others.

#### **Outstanding Opportunities Primitive Recreation**

A measure of the recreation experiences available without developments and facilities. The recreation opportunities available that allow users to feel a part of nature, with a high degree of challenge and reliance on outdoor skills rather than facilities.

#### **Special Features**

An attribute that recognizes that wilderness may contain other values of ecological, geologic, scientific, educational, scenic or historical or cultural significance. Unique fish and wildlife species, unique plants or plant communities, potential or existing research natural areas, outstanding landscape features, and significant cultural resource sites should all be considered as types of values that might exist.

During the Roadless Area Review and Evaluation (RARE) all Forest Service managed lands were inventoried for their wilderness and roadless character. Areas found to have these qualities were designated as Inventoried Roadless Areas (IRAs).

Three IRAs are located within the boundary of this project. These IRAs include the Horse Mountain-Manns Peak IRA (22,149 acres), the Mount Peal IRA (9,623 acres) and the South Mountain IRA (14,948 acres). These IRAs are managed under the 2001 Roadless Rule.

These three IRAs are located across the high country of the La Sals and include all of the highest peaks and alpine tundra areas in the range. The IRAs contain a wide range of vegetation from the alpine tundra to the lower elevation mountain brush and scrub oak vegetation communities.

The majority of the recreation use that occurs in the La Sals is located in these three IRAs or along their adjacent boundary roads. Dispersed camping is popular along the boundaries of the IRAs and a variety of recreation uses is popular within the IRAs including hunting, hiking, mountaineering, mountain biking, and backcountry skiing.

During the Forest Plan Revision process Forest Service managed lands on the Moab /Monticello Ranger District were inventoried again for wilderness and roadless character, this process resulted in the identification of additional lands that had these characteristics. Lands found to meet the criteria are now called Unroaded and Undeveloped lands. This inventory is currently in draft form and will not be finalized until the Forest Plan is revised in the future. Until that time the Unroaded and Undeveloped lands are not managed under the 2001 Roadless Rule but actions that are proposed within them are analyzed for their potential impacts to their wilderness and roadless character.

Several Unroaded and Undeveloped areas are within the project area including the Horse Mountain –Manns Peak, Mount Peale and South Mountain Unroaded and Undeveloped Areas. These were not new areas but were essentially recommended boundary changes for the existing IRAs.

### **3.4.2 Environmental Effects (Roadless and Wilderness Character)**

#### **Untrammeled**

The Proposed Action and Alternatives would not have a trammeling affected on the affected IRAs or Unroaded and Undeveloped Areas.

#### **Undeveloped**

Overall the Proposed Action and Alternatives would increase the amount of development in the IRAs, by adding constructed trails into the areas. The potential level of new development of the Proposed Action and Alternatives would vary by

area and trail. While constructed trails are considered a development and the Proposed Action and Alternatives would add new trails and thus increase the level of development, the trails would be designed in a way that would be substantially unnoticeable unless you are directly on the trail.

### **Naturalness**

The potential effects of the Proposed Action and Alternatives on naturalness would vary by area and trail. The Proposed Action and Alternatives would have varying levels of impacts on ecological systems (details of potential impacts to wildlife populations, habitat and riparian resources can be found in the Project Record)

In those areas that are currently being used and affected by recreationists (such in the sensitive alpine zone) the naturalness of the area will be improved by concentrating the existing use into one sustainable and maintained trail instead of allowing the multiple braided and unmaintained trails that occur in some popular locations.

In areas where recreation use and its associated impacts are currently not occurring and trail designations are being proposed primarily to create new trail opportunities, naturalness could be impacted by introducing a new use into the area. Potential impacts to naturalness in these areas include disruption of wildlife populations, increased erosion, riparian impacts and removal of vegetation for trail construction and maintenance.

All new trails would be constructed and maintained to Forest Service standards which would mitigate potential impacts to the naturalness of the IRAs

The proposed action and alternatives would meet the objectives of both the Visual Quality Objectives (VQOs) and the Recreation Opportunity Spectrum (ROS) for the area.

### **Outstanding Opportunities for Solitude**

The potential effects of the Proposed Action and Alternatives on opportunities for solitude would vary by area and trail. The potential effects would also depend on the level of use that the new trails would receive, which is difficult to predict.

Opportunities for solitude could be impacted if large amounts of recreational trail use began to occur on the new trails in the IRAs. While increased use could make it more difficult to find solitude in areas adjacent to system trails there would still be significant portions of the IRAs without trails.

Some portions of the Proposed Action and Alternatives may improve or maintain opportunities for solitude in the IRAs. These actions include; removing system trails, changing the designation of some system trails, placing seasonal closures on some trails and prohibiting commercial shuttle use in the La Sal Pass Area.

### **Outstanding Opportunities Primitive Recreation**

In considering the affects to wilderness character, mechanized use (mountain biking) is not considered a form of primitive recreation.

The potential effects of the Proposed Action and Alternatives on opportunities for primitive recreation would vary by area and trail. The potential effects would also depend on the level of use that the new trails would receive, which is difficult to predict. Opportunities for primitive recreation could be impacted if large amounts of biking use began to occur on the new trails in the IRAs. Generally opportunities for primitive recreation would not be impacted unless high use levels occurred.

The designation and construction of new non-motorized trails would not generally impact the opportunities for primitive recreation in the IRAs.

### **Special Features**

Special features in the IRAs include the Mount Peale Research Natural Area. Several trails are proposed within the RNA. Their potential impacts are discussed below by alternative.

Specific effects from the alternatives to roadless and wilderness character are found below.

The amount of proposed new trails and designation changes to existing trails vary by alternative within the IRAs. Table 11 below shows trail mileages and designation changes within the IRAs by alternative.

**Table 11. Miles of new trail, designation changes and trail removal proposed within IRAs by alternative**

	<b>Miles of new trail open to foot travel only in IRAs</b>	<b>Miles of new trail open to foot and horse travel only in IRAs</b>	<b>Miles of new trail open to all non-motorized uses in IRAs</b>	<b>Miles of existing trail changed to Foot and Horse Travel Only in IRAs</b>	<b>Mils of Trail removed from the system within IRAs</b>	<b>Miles of designation change to allow for motorcycle use in IRAs</b>
<b>No Action</b>	0	0	0	0	0	0
<b>Proposed Action</b>	1.3	6.5	5.1	11.5	3.5	3.2
<b>Alternative 3</b>	1.4	7.7	20	0	0	3.2
<b>Alternative</b>	.7	3.9	0	22.1	4.7	0

4						
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#### **3.4.2.1 Alternative 1 No Action**

Current trail system would remain in place.

No new trails would occur within the IRAs or Unroaded Undeveloped Areas. No trails would be removed from the IRAs and no designation changes would occur.

No new impacts to roadless or wilderness character would occur.

#### **3.4.2.2 Alternative 2 Proposed Action**

Potential impacts to the undeveloped character of the IRAs from the Proposed Action include the designation of 12.9 miles of new trail within the IRAs. The developed character would also be improved in a portion of the Horse-Mountain-Manns Peak IRA by removing 3.5 miles of system trail.

Opportunities for solitude may be impacted by the designation of 12.9 miles of new trail. The Proposed Action would include trails that are currently being used to access major peaks as well as the upper cirques of Gold Basin, but it would also include 5.1 miles of new trails open to all non-motorized uses that are in areas where recreational trail use is not occurring or is very infrequent.

Opportunities for solitude could be improved in some portions of the IRAs by changing the designation of 11.5 miles of existing trail to open to foot and horse only, by removing 3.5 miles of system trails from the IRAs , by placing seasonal closures on the Burro Pass and Moonlight Meadows trails and by prohibiting commercial shuttle use in the La Sal Pass area.

The Proposed Action could impact the opportunities for solitude and primitive recreation in the South Mountain IRA by designating the 3.2 mile Carpenter Basin Trail as open to motorcycles.

The proposed Tuk trail within the Mount Peale RNA, (a special feature of the Mount Peale IRA) would focus foot travel on one trail instead of the braided cross-country travel that is now occurring in the area. Keeping users on a managed trail in the alpine zones of the RNA will maintain the sensitive vegetation communities in the area.

#### **3.4.2.3 Alternative 3 Increased Trail Opportunities**

Alternative 3 would have the highest potential for impacting roadless and wilderness character.

Alternative 3 would add 29.1 miles of new trails into the IRAs, which would be the largest amount of new trails of all the alternatives. These new trails would have the largest impact on the undeveloped character of the IRAs.

Alternative 3 would have the highest potential for impacting opportunities for solitude and primitive recreation in the IRAs. This alternative would include trails that are currently being used to access major peaks as well as a hiking loop to the upper cirques of Gold Basin, but it would also include 20 miles of new trails open to all non-motorized uses that are in areas where recreational trail use is not occurring or is very infrequent.

Alternative 3 could impact the opportunities for solitude and primitive recreation in the South Mountain IRA by designating the 3.2 mile Carpenter Basin Trail as open to motorcycles.

Alternative 3 would include the designation of the Tuk Trail as well as the Top Shelf Trail in the Mount Peale RNA.

#### ***3.4.2.4 Alternative 4 Increased Recreation Restrictions***

Alternative 4 would have the least potential effects to the roadless and wilderness character of the IRAs.

Alternative 4 would have the least impact to the undeveloped character of the IRAs by designating 4.6 miles of new trails, which is the least amount of all the action alternatives. Alternative 4 would also remove 5.8 miles of system trail from the Horse Mountain and Manns Peak IRA.

Alternative 4 has the least potential to impact opportunities for solitude in the IRAs. The only new trails proposed in the IRAs under this alternative would be for access to the high peaks (Manns Peak, Mount Tukinikivatz and Gold Knob) where use is already occurring.

The proposed Tuk trail within the Mount Peale RNA, (a special feature of the Mount Peale IRA) would focus foot travel on one trail instead of the braided cross-country travel that is now occurring in the area. Keeping users on a managed trail in the alpine zones of the RNA will maintain the sensitive vegetation communities in the area.

The proposed designation change on the Carpenter Basin trail to allow for motorcycle use would not occur under this alternative and the IRA would not be fragmented by the motorized trail.

#### **3.4.2.5 Cumulative Effects**

The activities that overlap in time and space include within the IRAs include; livestock grazing management, outfitter and guide management, fuels management, and prescribed burning.

Cumulative effects would be similar between all the alternatives. Livestock grazing occurs in the IRAs, but does not have similar impacts as trails and recreation activities. The vegetative treatments within the IRAs that may add cumulatively to effects from the proposed project include, hazardous fuels projects and prescribed burning. When considered with other projects occurring within the IRAs it is not anticipated that unacceptable impacts will occur to roadless and wilderness character of the affected IRAs and Unroaded Undeveloped Areas.

### **3.5 Specifically Required Disclosures**

#### **3.5.1 National Forest Management Act of 1976 (NFMA)**

The Manti-La-Sal Land and Resource Management Plan was approved November 5, 1986, as required by this Act and amended. This long range land and resource management plan provides guidance for all resource management activities on the forest. NFMA requires all projects and activities to be consistent with the Forest Plan. The Forest Plan has been reviewed in consideration for this project. The proposal is consistent with Forest Plan goals, objectives, standards and guidelines.

This EA and supporting documents in the Project Record document interdisciplinary review as required by NEPA.

#### **3.5.2 Threatened and Endangered Wildlife, Fish and Plant Species**

The Endangered Species Act (ESA, 16 U.S.C. 35 §§ 1531 et seq. 1988) provides for the protection and conservation of threatened and endangered plant and animal species. All action alternatives were assessed to determine their effects on threatened and endangered plant and animal species.

A Biological Assessment consistent with the requirements of the ESA was prepared on the action alternatives and can be found in the Project Record. The Biological Assessment determined that the proposed action and alternatives would have “No Effect” on any listed species as the proposed project is not in primary habitat and no listed species are known to occur in the project areas.



### **3.5.3 Migratory Birds**

High priority migratory bird species/species of concern are identified in several reports. The Utah Partners In Flight (UPIF) Avian Conservation Strategy (Parrish et al 2002) includes a list of priority species and habitats in need of conservation. The Utah Comprehensive Wildlife Conservation Strategy prepared by the Utah Division of Wildlife Resources (2005) includes migratory bird species of management concern. The U.S. Fish and Wildlife Service (USFWS) prepared the “Birds of Conservation Concern 2008” report, which identified more than 100 bird species that deserve prompt conservation attention to stabilize or increase populations or to secure threatened habitats (USFWS 2008). These species are summarized in the project Wildlife Report.

Priority habitats in Utah identified in the PIF assessment (Parrish et al 2002) as the most in need of conservation action which may be impacted by non-motorized trails and their use in the project area are mountain riparian, shrubsteppe (sagebrush/grassland) and pinyon-juniper. Conservation measures in the UPIF Avian Conservation Strategy will be followed where appropriate to meet the Migratory Bird Treaty Act, Executive Order 13186 and the 2008 MOU between the U.S. Forest Service and the USFWS.

### **3.5.4 Cultural and Historic Resources**

The National Historic Preservation Act (NHPA) is the primary Federal law providing for the protection and preservation of prehistoric and historic resources. The NHPA and its implementing regulations in 36 CFR 800 specify that all Federal, Federally funded, Federally assisted, licensed or permitted undertakings will be considered for their potential to affect significant cultural resources. These effects are of three kinds: No Historic Properties Affected, No Adverse Effect, and Adverse Effect.

A cultural resource survey was conducted along 50 miles of 58 miles of priority trails included in the proposed action and alternatives; the remainder of the priority trails are generally steep (>30 percent slope) and in locations not favored for cultural sites. Twenty-four archaeological sites are located along the trails, thirteen of which are eligible to the National Register of Historic Places. Impacts to these sites are to be avoided through project design features during the implementation phase of the project.

The cultural resource inventory identified the following areas/trails as having potential impacts to cultural resources.

#### **The Squaw Springs Exit Trail**

The Squaw spring/Dorry Exit trail is proposed in the Proposed Action and Alternative 3, the majority of the trail is located along the designated motorized trail #4969. The proposed trail contains six sites. Four sites are eligible for listing in the National Register of Historic Places. Several of the

sites are situated along the designated motorized trail #4696. The existing trail corridor is wide and the sites are not highly visible from the motorized trail; therefore the proposed increase in bike use along the motorized trail is unlikely to negatively impact these sites. The portion of the trail that will require new construction will be routed around the eligible sites.

### **Jimmy Keen Flat Trail System**

The designated Forest Service roads 636 and 638 bisect several sites. These roads are currently designated Level 2 roads on the Motor Vehicle Use Maps. These roads are not very distinct and will need to be defined by new cut trails or by cairns. The bisected sites are large lithic scatters that are extremely visible on the ground. Increased non-motorized use may occur along these Forest Roads if the Jimmy Keen Trail System is designated and constructed. This new use may potentially lead to increased artifact collection from these sites. However, the roads are currently open to both motorized and non-motorized use and their designation would not change as result of this project.

New trails not surveyed for cultural resources that are designated by this project that may cause ground disturbance, will need to be surveyed by the Monticello District archaeological program prior to project implementation.

Therefore, if all eligible sites are avoided and unsurveyed trails are surveyed for cultural resources during and prior to the implementation of the Moab Non-Motorized Trails project, a no historic properties affected determination is appropriate for the proposed project.

In consultation with the Utah State Historic Preservation Office (SHPO) the Forest Service has determined a finding of *No Historic Properties Affected* is appropriate to the proposed project providing the stipulations above are followed.

### **3.5.5 Wetlands and Floodplains**

There are wetlands, floodplains and riparian areas within the project area. Design features have been included in the Proposed Action and all action alternatives that minimize disturbance in these areas and provide for protection. These include constructing all new trails to Forest Service trail standards and including turnpikes, hardened crossings or bridges at all stream and wetland crossings. Best Management Practices (BMPs) and Soil and Water Conservation Practices (SWCPs) will be implemented to mitigate adverse effects and are described in Appendix H.

The Proposed Action and action alternatives meet the intent of Executive Order 11988, 11990 and the Clean Water Act.

### **3.5.6 Environmental Justice**

In accordance with Executive Order (EO) 12898 (59 FR 32, 1994), all action alternatives were assessed to determine whether they would have disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority or low-income human populations. No effects were identified during the comment period on the Proposed Action.

### **3.5.7 Effects on Social Groups**

There are no anticipated differential effects on minorities, Native American Indians, women, or civil liberties of any American citizen from resulting from the Proposed Action or any of the action alternatives.

### **3.5.8 Prime Farmland, Rangeland and Forestland**

All alternatives are in accordance with the Secretary of Agriculture Memorandum 1827 for prime farmland, rangeland and forestlands. "Prime" forestland is a term used only for non-federal land, which would not be affected, by any of the proposed alternatives. National Forest lands would be managed with sensitivity to adjacent private lands.

### **3.5.9 Energy Requirements and Conservation Potential**

In terms of petroleum products, the energy required to implement the Proposed Action and action alternatives is inconsequential when viewed in light of production costs and effects on the national and worldwide petroleum preserves.

### **3.5.10 Effects on the Human Environment**

The civil rights of all American citizens, including women and minorities, are not differentially affected by implementation of any of the alternatives.

### **3.5.11 Conflicts with other Agency Goals and Objectives**

Public involvement other Federal, State and local agencies indicate there are no major conflicts between the proposed action and the goals and objectives of governmental agencies.

### **3.5.12 Climate Change**

The Resources Planning Act of 1974 (updated in 2007) update acknowledges and addresses climate change, and indicates that climate variability makes predictions about drought, rainfall and temperature extremes highly uncertain. Based on the best available science, it would be too remote and speculative to factor any specific ecological trends or substantial changes in climate into an analysis of environmental impacts of the proposed project. Research about long-range shifts in species range etc. is ongoing and a number of groups are discussing the implications of climate change on forest management. Although there is solid consensus that global

warming is occurring, there is much uncertainty about subsequent ecological interactions and trends at the local or site-specific scale. Given the stochastic nature of climate related events such as droughts, wildfires and floods it would be highly remote and speculative to make management decisions based on such predictions. The best available science is not yet adequate to support reliable predictions about ecological interactions and trends at the local (site-specific) scale.

It is not anticipated that the Proposed Action or action alternatives would have any impact on conditions or factors leading to climate change.

### **3.5.13 Healthy Forest Restoration Act of 2004 (HFRA)**

All alternatives are consistent with direction in HFRA

## **3.6 Trail Maintenance and Construction Costs**

As annual budgets for the trail program on the Manti- La Sal National Forest continue to fall, the costs associated with constructing and maintaining new trails is a very real factor in determining the appropriate size of a financially sustainable trail system.

Determining a standard cost for new trail construction and maintenance is very difficult. There are many differing variables involved for each trail such as; topography, slopes, grades, soil and vegetation types and access to the areas that all combine to make it difficult to determine a standard cost.

To arrive at an estimate of what each of the alternatives would cost to implement, a range of costs was used. These costs were determined by Trails Unlimited a Forest Service, enterprise team with extensive experience constructing and maintaining trails on Forest Service lands. Trails Unlimited estimates that trail construction costs between \$2,500 -\$12,000 per mile and maintenance is around \$2,000-\$6,000 per mile.

Table 12 contains the range of costs above the current maintenance costs for each alternative

**Table 12. Implementation and Maintenance Costs above Current (2013) Levels by Alternative**

	<b>Range of Costs /Mile</b>	<b>Alt. 1 No Action</b>	<b>Alt.2 Proposed Action</b>	<b>Alt. 3 Increased Trail Opportunities</b>	<b>Alt. 4 Increased Recreation Restrictions</b>
<b>New</b>	\$2,500-	<b>0</b>	<b>\$58,750-</b>	<b>\$126,250-</b>	<b>\$15,000-</b>

<b>Construction</b>	\$12,000		<b>\$278,400</b>	<b>\$606,000</b>	<b>\$72,000</b>
<b>Annual Maintenance (Above Current Maintenance Levels)</b>	\$2,000-\$6,000	<b>0</b>	<b>\$47,000-\$141,000</b>	<b>\$101,000-\$303,000</b>	<b>\$12,000-\$36,000</b>

## CHAPTER 4 CONSULTATION AND COORDINATION

### 4.1 List of Preparers

Brian Murdock	Recreation Planner/Team Leader
Nathan Lewis	Environmental Coordinator
Donald Irwin	Archaeologist
Joni Vanderbilt	Hydrologist
Barb Smith	Wildlife Biologist
Tina Marian	Rangeland Management Specialist
Greg Montgomery	Forester
Michael Diem	District Ranger

### 4.2 Individuals, Agencies, and Organizations who submitted Scoping Comments in Response to the Proposed Action

**Table 13. List of Individuals, Agencies, and Organizations that submitted comments**

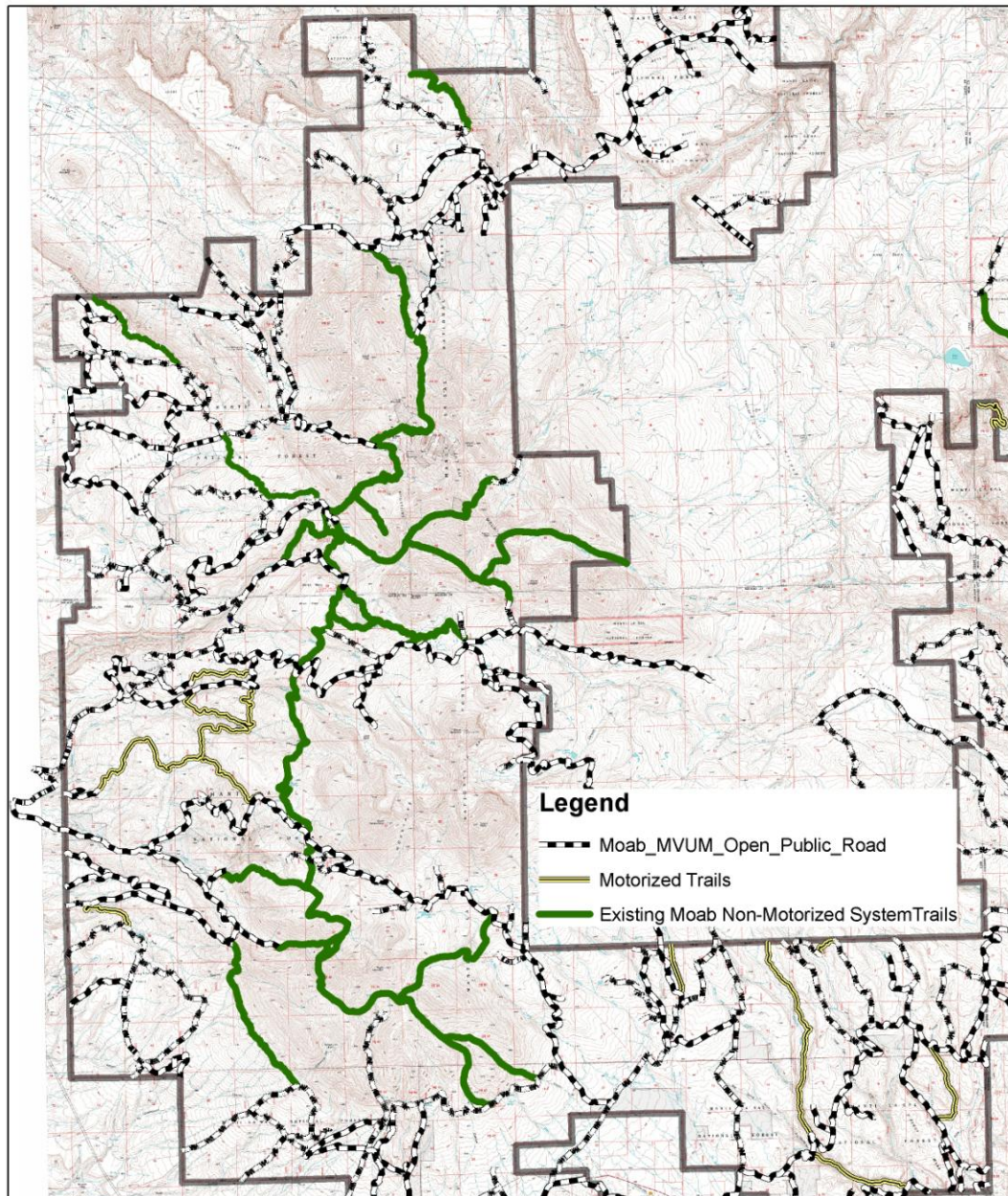
<b>NAME/TITLE</b>	<b>COMPANY/ORGANIZATION</b>
Ashley Korenblat Kirsten Peterson Kimberly Schappert	Moab Trails Alliance

Shawn Hanka	Individual
Kalen Jones	Individual
Tim Peterson, Program Director	Grand Canyon Trust, Utah Environmental Congress, Southern Utah Wilderness, and Great Old Broads for Wilderness
Kevin Muller, Utah Environmental Congress	
Liz Thomas, Field Attorney, Southern Utah Wilderness Alliance	
Veronica Egan, Executive Director, Great Old Broads for Wilderness	
Nick Sandberg, Public Lands Coordinator	San Juan County
Dennis Silva	Individual
Kristi Jensen	Coyote Shuttle
Paul Frank	Individual
Brooks Carter	Individual
Kirsten Peterson	Rim Tours
Anne Clare Erickson	Individual
Lisa Hathaway	Friends of Indian Creek The Access Fund
Sam Lightner	
Jason Kieth	
Matt Hebbard, Vice President	Rim Tours
Bill Settle	Rim Tours
Jeremy Fancher, Policy Analyst, In-House Council	International Mountain Biking Association
Sylvi White	Individual
Anthony Quintile	Flagstaff Biking Organization
Wendy Palmer	Individual
Tracy Reed, Owner	Chile Pepper Bike Shop
Gerrish Willis	Individual
Leigh Kuwanwisiwma, Director	Hopi Cultural Preservation Office
Mary Moran	Individual
Sandy Freethy, Chair	Grand County Trail Mix
Bill Love	Individual
Jay Banta	Utah Chapter, Backcountry Hunters and Anglers
Ed Oak	Individual
Darcey Brown	Individual
Thea Nordling	Individual
John Covey	Individual
Tim Bateman	Individual
Sue deVall	Individual
Noah Bigwood	Individual
Glen Griscom	Individual
Zach Glover	Individual
Ginny Carlson	Individual
Karen Robinson	Individual

Tom Dillon	Individual
Laurel Hagen , Executive Director	Canyonlands Watershed Council
Susie Harrington	Individual
Ruth Dillon	Individual
Whit Richardson	Individual
Clif Koontz, Program Director	Ride with Respect
Dale Parriot, Executive Director	
Max Forgensi	Individual

## **Appendix A. Overview Map of the Existing Trail System (No Action Alternative)**

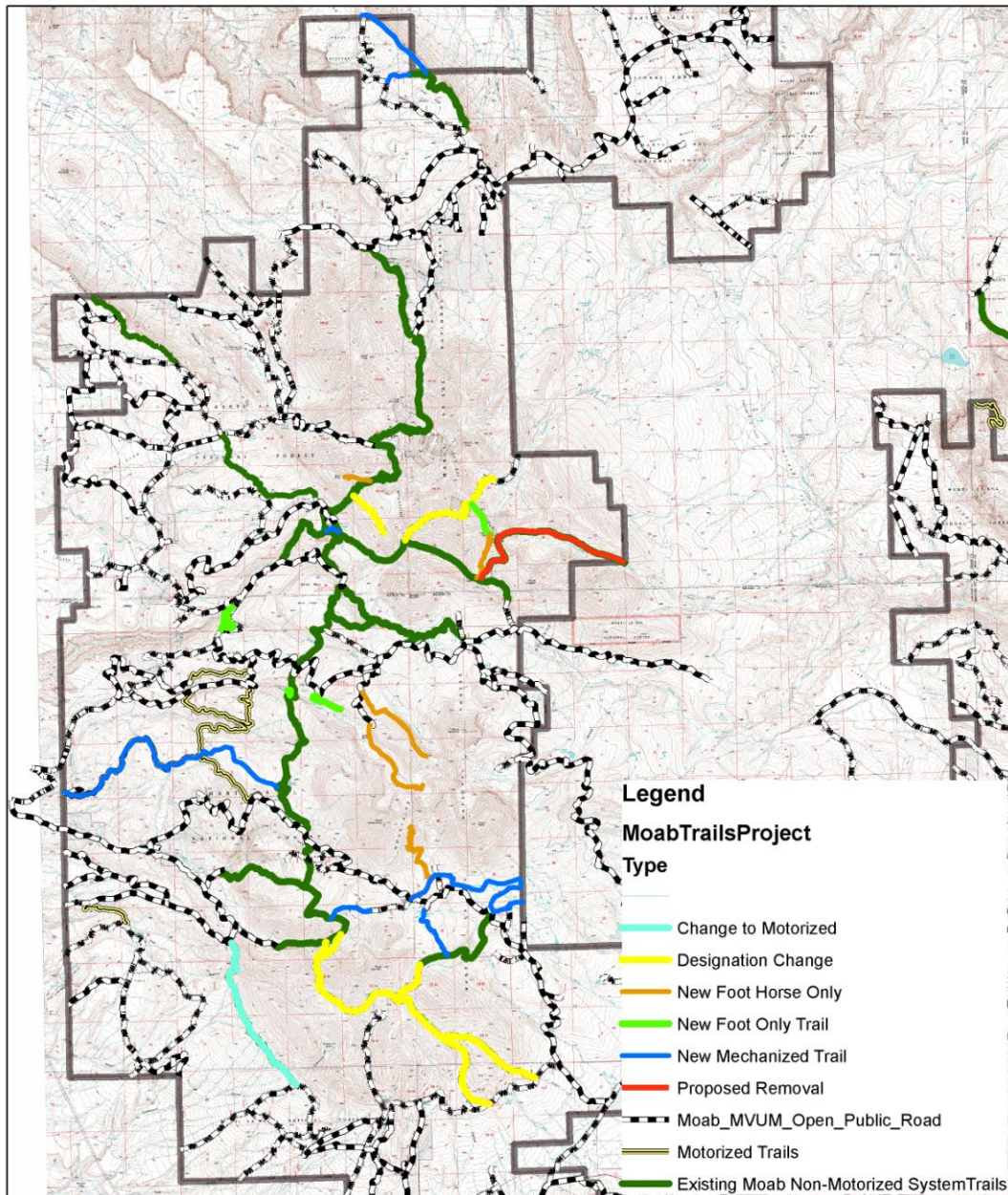
Alternative 1 No Action  
Overview



**Appendix B. Overview Map of Proposed Action**



## Alternative 2 Proposed Action Overview

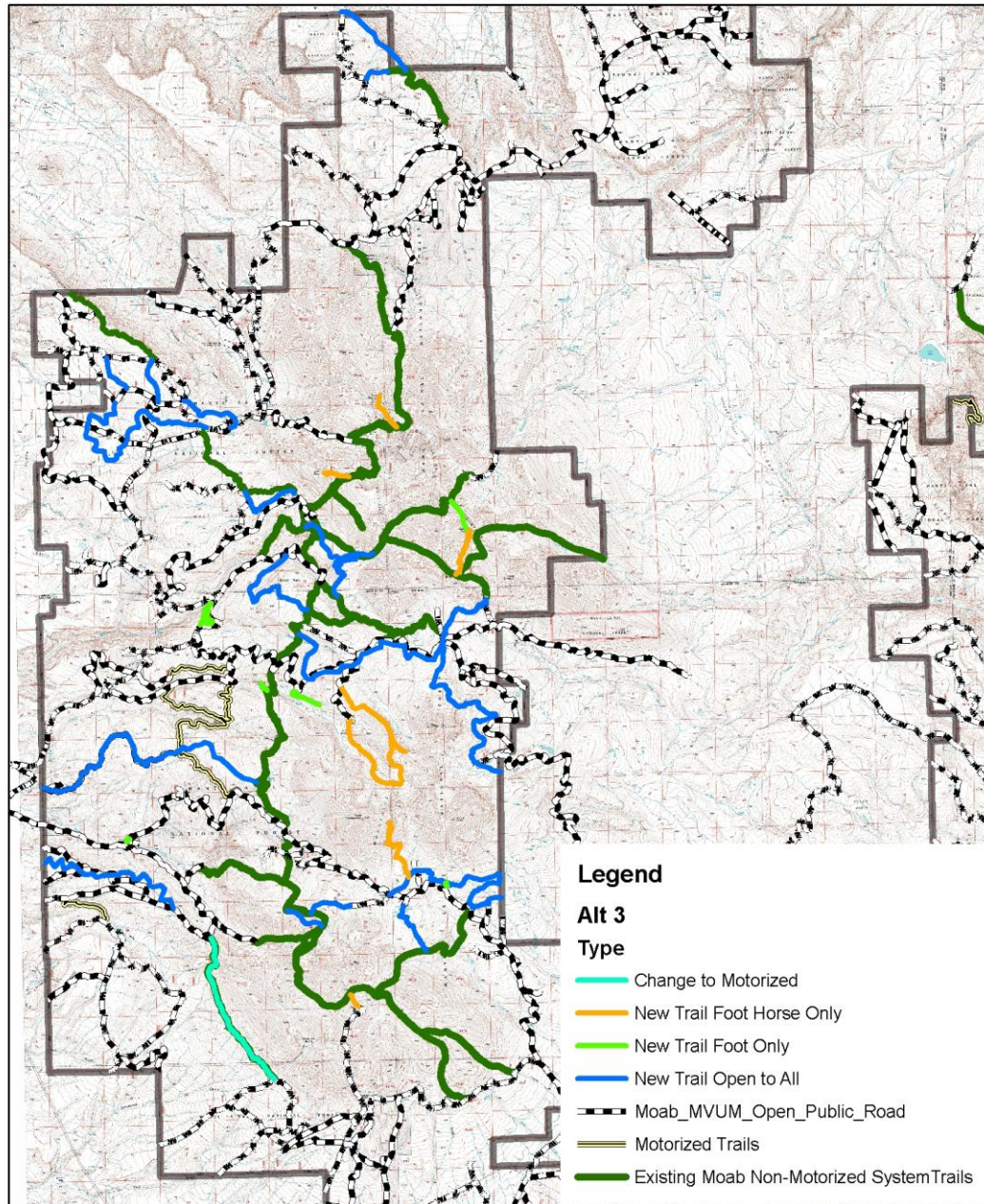


Detailed maps of each alternative are available at [www.fs.fed.us/r4/mantilasal/projects/](http://www.fs.fed.us/r4/mantilasal/projects/) or at the Moab or Monticello Ranger Stations.



## Appendix C. Overview Map of Alternative 3

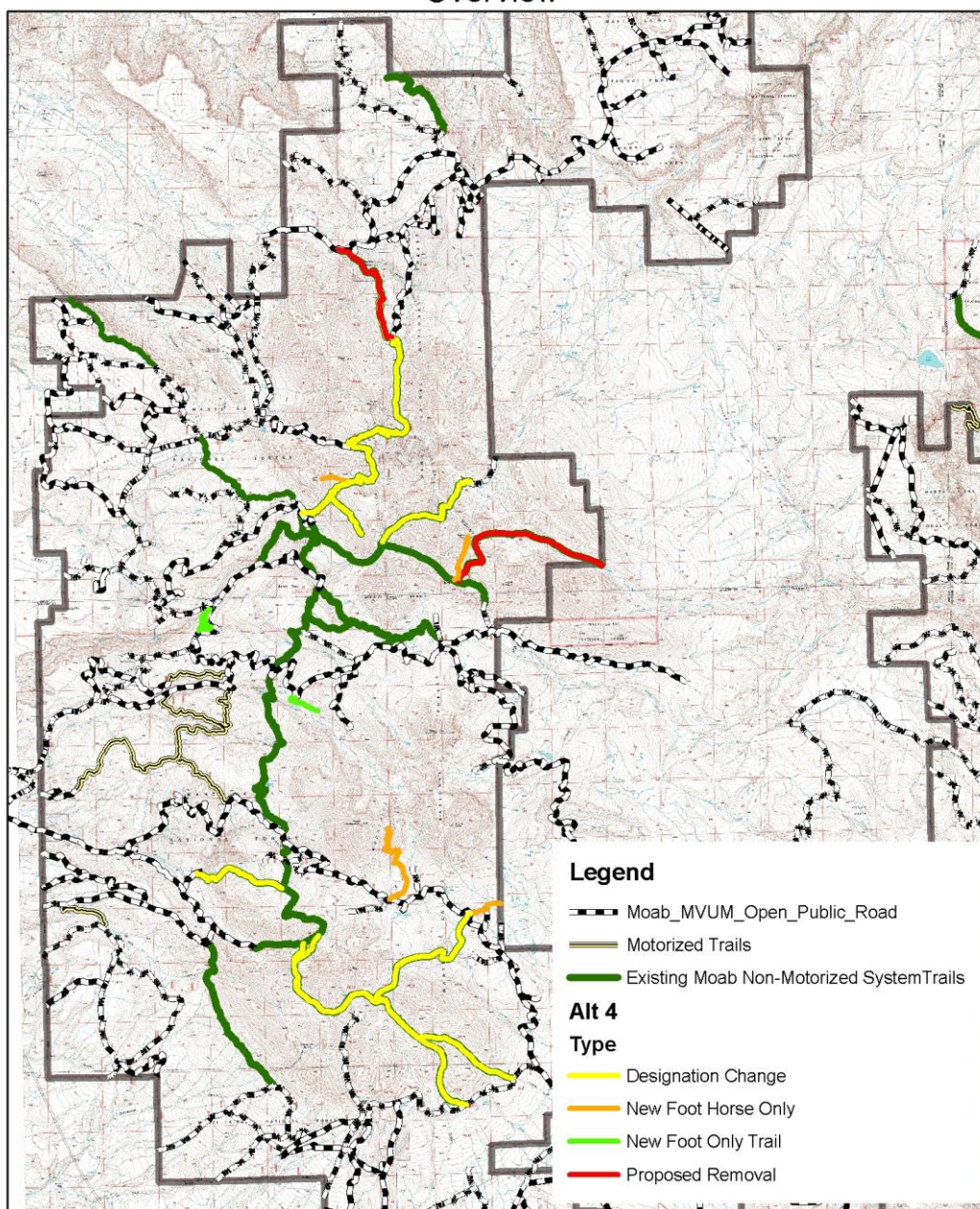
### Alternative 3 Increased Trail Opportunities Overview





## Appendix D. Overview Map of Alternative 4

Alternative 4 Increased Recreation Restrictions  
Overview



## Appendix E. Trail Design Parameters and Features

It is anticipated that all of the newly designated trails would be Trail Class 1 or 2 with the exception of the Mill Creek Overlook Trail which would be Class 3. All trails open to foot only would be built to Class 1 standards, trails open to horse and bike would be constructed to Class 1 or 2 standards.

### Forest Service Design Parameters for various types of non-motorized trails

Designed Use HIKER/PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3 <sup>2</sup>
Design Tread Width	Wilderness (Single Lane)	0" – 12"	6" – 18"	12" – 24" Exception: may be 36" – 48" at steep side slopes
	Non-Wilderness (Single Lane)	0" – 12"	6" – 18"	18" – 36"
	Non-Wilderness (Double Lane)	36"	36"	36" – 60"
	Structures (Minimum Width)	18"	18"	18"
Design Surface <sup>3</sup>	Type	Native, ungraded May be continuously rough	Native, limited grading May be continuously rough	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough
	Protrusions	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, not continuous
	Obstacles (Maximum Height)	24"	14"	10"
Design Grade <sup>3</sup>	Target Grade	5% – 25%	5% – 18%	3% – 12%
	Short Pitch Maximum	40%	35%	25%
	Maximum Pitch Density	20% – 40% of trail	20% – 30% of trail	10% – 20% of trail

Design Cross Slope	Target Cross Slope	Natural side slope	5% – 20%	5% – 10%
	Maximum Cross Slope	Natural side slope	25%	15%
Design Clearing	Height	6'	6' – 7'	7' – 8'
	Width	≥ 24" Some vegetation may encroach into clearing area	24" – 48" Some light vegetation may encroach into clearing area	36" – 60"

	<b>Shoulder Clearance</b>	3" – 6"	6" – 12"	12" – 18"
<b>Design Turn</b>	<b>Radius</b>	No minimum	2' – 3'	3' – 6'

<b>Designed Use PACK AND SADDLE</b>		<b>Trail Class 1</b>	<b>Trail Class 2</b>	<b>Trail Class 3</b>
<b>Design Tread Width</b>	<b>Wilderness</b> (Single Lane)	Typically not designed or actively managed for equestrians, although use may be accepted	12" – 18" May be up to 48" along steep side slopes 48" – 60" or greater along precipices	18" – 24" May be up to 48" along steep side slopes 48" – 60" or greater along precipices
	<b>Non-Wilderness</b> (Single Lane)		12" – 24" May be up to 48" along steep side slopes 48" – 60" or greater along precipices	18" – 48" 48" – 60" or greater along precipices
	<b>Non-Wilderness</b> (Double Lane)		60"	60" – 84"
	<b>Structures</b> (Minimum Width)		Other than -bridges: 36" Bridges without handrails: 60" Bridges with handrails: 84" clear width	Other than bridges: 36" Bridges without handrails: 60" Bridges with handrails: 84" clear width
<b>Design Surface<sup>2</sup></b>	<b>Type</b>		Native, limited grading May be frequently rough	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough
	<b>Protrusions</b>		≤ 6" May be common and continuous	≤ 3" May be common, not continuous
	<b>Obstacles</b> (Maximum Height)		12"	6"

<b>Design Grade<sup>2</sup></b>	<b>Target Grade</b>		5% – 20%	3% – 12%
	<b>Short Pitch Maximum</b>		30%	20%
	<b>Maximum Pitch Density</b>		15% – 20% of trail	5% – 15% of trail
<b>Design Cross Slope</b>	<b>Target Cross Slope</b>		5% – 10%	3% – 5%
	<b>Maximum Cross Slope</b>		10%	8%
<b>Design</b>	<b>Height</b>		8' – 10'	10'

<b>Clearing</b>	<b>Width</b>		72"	72" – 96"
	<b>Shoulder Clearance</b>		Some light vegetation may encroach into clearing area 6" – 12" Pack clearance: 36" x 36"	12" – 18" Pack clearance: 36" x 36"
<b>Design Turn</b>	<b>Radius</b>		4' – 5'	5' – 8'

<b>Designed Use BICYCLE</b>		<b>Trail Class 1</b>	<b>Trail Class 2</b>	<b>Trail Class 3</b>
<b>Design Tread Width</b>	<b>Single Lane</b>	6" – 12"	12" – 24"	18" – 36"
	<b>Double Lane</b>	36" – 48"	36" – 48"	36" – 48"
	<b>Structures</b> (Minimum Width)	18"	18"	36"
<b>Design Surface<sup>2</sup></b>	<b>Type</b>	Native, un-graded May be continuously rough Sections of soft or unstable tread on grades < 5% may be common and continuous	Native, limited grading May be continuously rough Sections of soft or unstable tread on grades < 5% may be common	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough Sections of soft or unstable tread on grades < 5% may be present, but not common
	<b>Protrusions</b>	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, not continuous
	<b>Obstacles</b> (Maximum Height)	24"	12"	10"
<b>Design Grade<sup>2</sup></b>	<b>Target Grade</b>	5% – 20%	5% – 12%	3% – 10%
	<b>Short Pitch Maximum</b>	30% 50% on downhill-only segments	25% 35% on downhill-only segments	15%
	<b>Maximum Pitch Density</b>	20% – 30% of trail	10% – 30% of trail	10% – 20% of trail
<b>Design Cross Slope</b>	<b>Target Cross Slope</b>	5% – 10%	5% – 8%	3% – 8%
	<b>Maximum Cross Slope</b>	10%	10%	8%
<b>Design</b>	<b>Height</b>	6'	6' – 8'	8'

<b>Designed Use BICYCLE</b>		<b>Trail Class 1</b>	<b>Trail Class 2</b>	<b>Trail Class 3</b>
<b>Clearing</b>	<b>Width</b>	24" – 36" Some vegetation may encroach into clearing area	36" – 48" Some light vegetation may encroach into clearing area	60" – 72"
	<b>Shoulder Clearance</b>	0' – 12"	6" – 12"	6" – 12"
<b>Design Turn</b>	<b>Radius</b>	2' – 3'	3' – 6'	4' – 8'

### **Design Features for Proposed Trails**

- All new trails and reroutes will be constructed to Forest Service standard as shown in the Design Parameters above. Standards will vary based on trail class and allowable use designations.
- Potential adverse impacts of any of the proposed trails located near cliff nesting raptor habitat will be reduced by moving trails back from the rim/cliff edges when the trail is located directly above potential habitat. Topography and vegetation will be utilized for screening the trail and access to the rim will be directed to selected viewpoints.
- If approved the Hells Canyon trail reroute will be designed to minimize intrusion into raptor nesting buffer. The reroute should be no closer to the canyon rim than existing route.
- If approved the Fisher Mesa Extension will be moved further from the canyon rim in several locations as determined by biologist to protect raptor nesting locations.
- If approved no commercial or competitive recreation events will be permitted on the Geyser to Burro Pass trail.
- If approved the Jimmy Keen Flat area trails and open roads will be monitored during the late winter/spring to determine if elk use is affected. If affected a seasonal restriction (Dec 1-April 15) on trails and roads in area will be considered to minimize impacts on elk from the trail and road use.
- If approved the Medicine Lake trail will require an additional northern goshawk survey to design a specific trail alignment with the least potential to impact goshawk nesting territory.
- Route new trails so as to avoid having to cut any snags >18" dbh or existing cavity trees
- Routes in alpine habitat (Mt. Tuk, Manns Peak etc) will be designed to avoid sensitive plant populations with the assistance of the District Biologist
- Follow all soil/water protection recommendations for new trail construction identified in the Hydrology Report.
- The Forest Hydrologist will be consulted to determine location and specifications of structures built to mitigate any impacts to riparian area on trails identified in the Hydrology Report.

- Approved reroutes will be inventoried for impacts to cultural and wildlife resources prior to construction.
- Trails with cultural resource concerns that were identified during the cultural resource inventory will be designed and constructed in conjunction with the District Archeologist to ensure impacts do not occur to cultural resources.
- Trails with wildlife resource concerns that were identified during the wildlife resource inventory will be designed and constructed in conjunction with the District Biologist to ensure impacts do not occur to wildlife resources.



## Appendix F. Soil and Water Conservation Practices (SWCP's) and Best Management Practices (BMP's)

To comply with the antidegradation policy and State water quality standards, the Forest Service must implement or ensure the implementation of practices that maintain the current, high level of water quality. These include practices in Forest Service Handbook 2509.22, *Soil And Water Conservation Practices*; State best management practices; or specialized, site-specific practices. All these types of practices are designed to fully protect and maintain water-related beneficial uses, and to prevent or minimize nonpoint source pollution (UT NPS, 1998).

### SWCP's applicable to the planning phase of the proposed project include:

SWCP	SWCP OBJECTIVE	CONSIDERATIONS FOR IMPLEMENTATION
11.01	DETERMINATION OF CUMULATIVE WATERSHED EFFECTS – To determine the cumulative effects or impacts on beneficial water uses by multiple land management activities.	See the appropriate section of the EA/EIS
11.04	FLOODPLAIN ANALYSIS AND EVALUATION – To protect floodplain values and avoid, where possible, the long and short-term adverse impacts to soil and water resources associated with the occupancy and modification of floodplains.	<i>The SWCP states that a floodplain analysis and evaluation will be made when sites within floodplains are being considered for structures, developments, or management activities. Environmental quality, ecological effects, and individual safety and health will be considered.</i> This has been conducted.
11.05	WETLANDS ANALYSIS AND EVALUATION – To maintain wetlands function and avoid adverse soil and water resource impacts associated with the destruction or modification of wetlands.	<i>The SWCP states that the Forest Service does not permit the implementation of activities and new construction in wetlands whenever there is a practical alternative. A wetland analysis and evaluation will be made prior to acquisition or exchange of wetlands. Evaluation of proposed actions in wetlands will consider factors relevant to the proposal's effect on the survival and quality of the wetlands.</i> Construction in Wetlands would not occur with the proposed activity.
14.05	PROTECTION OF UNSTABLE AREAS - To protect unstable areas and avoid triggering mass movements of the soil mantle and resultant erosion and sedimentation.	This has been evaluated and no unstable areas were identified.
15.01	GENERAL GUIDELINES FOR TRANSPORTATION PLANNING - To introduce soil and water resource considerations into transportation planning.	This has been completed
15.02	GENERAL GUIDELINES FOR THE LOCATION AND DESIGN OF ROADS AND TRAILS - To locate and design roads and trails with minimal soil and water impact while considering all design criteria.	An alternative was included that emphasized minimizing impacts to soil and water values (Alternative 2). Mitigation measures would be included on routes near to and crossing the drainage network applicable to other action alternatives.
15.03	ROAD AND TRAIL EROSION CONTROL PLAN - To prevent, limit, and mitigate erosion, sedimentation, and resulting water quality degradation by timely implementation of specialized erosion control practices.	For special circumstances that require additional, specialized measures not already covered in the following listing of practices. This may need to be developed with Recreation specialist for the Two Mile OHV Route (Alternative 1 and Proposed Action)

**SWCP's applicable to the implementation phase of the proposed project include:**

SWCP	SWCP OBJECTIVE	CONSIDERATIONS FOR IMPLEMENTATION
12.11	PROTECTION OF WATER QUALITY WITHIN DEVELOPED AND DISPERSED RECREATION AREAS – To protect water quality by regulating the discharge and disposal of potential pollutants.	<i>This SWCP prohibits placing in or near a stream, lake, or other waterbody, materials or substances which may degrade water quality. The actual safe distance from each waterbody is at least 100 feet, or greater if warranted by local conditions. This includes, but is not limited to, human and animal waste, oil, and other hazardous substances. Areas may be closed in order to restrict use in problem areas.</i>
13.04	REVEGETATION OF SURFACE DISTURBED AREAS - To protect soil productivity and water quality by minimizing soil erosion	<p>A combination of the following may be applicable to routes proposed for closure.</p> <p>Surface soils will be salvaged to a minimum depth of 6 inches. If topsoil depths are greater than 6 inches, the entire depth will be salvaged, stockpiled, and protected from erosion or other damages during operations.</p> <p>Salvaged topsoil will be spread over areas from which the topsoil was stripped. The surface should be left rough/pitted (with surface variations of 6-12 inches) to limit rilling and to provide for water retention to enhance seed germination. Topsoil will not be spread when the ground or topsoil is frozen, wet, or powdery.</p> <p>All disturbed areas will be seeded with seed mixtures developed for the project. The seed will be certified weed and noxious weed free. The proponent will have an independent test of seed purity, germination, and weed content prior to seed application. Seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting. If the soil surface is crusted, take appropriate measure to break up the crusted areas prior to seeding.</p> <p>Mulch will be applied on areas with highly erodable or droughty soils, slopes greater than 40 percent, visually sensitive areas, 100' on both sides of waterbodies, and other areas as specified by the agency project administrator.</p>
15.04	TIMING OF CONSTRUCTION ACTIVITIES - To minimize erosion by conducting operations during minimal runoff periods.	<p>Applicable to trail improvements, heavy maintenance and reconstruction:</p> <p>The normal operating season includes the time period that typically has suitable soil moisture and runoff conditions for most Forest activities and operations.</p> <p>The proponent should schedule and conduct most operations within the normal operating season. The proponent shall conduct all activities to prevent erosion and sedimentation. Temporary erosion control measures may be required to prevent, control, and mitigate erosion and sedimentation. Temporary and permanent erosion control work must be kept current with ongoing operations, especially when construction occurs outside of the normal operating season. See SWCP 13.06 for soil moisture criteria.</p>
15.05	<p>SLOPE STABILIZATION AND PREVENTION OF MASS FAILURES - To reduce sedimentation by minimizing the chances for road-related mass failures, including landslides and embankment slumps.</p> <p><b><i>Note that this SWCP applied to any temporary working travelway.</i></b></p>	<p>Unstable areas are generally avoided. The proponent will avoid undercutting road-side slopes. Slumped or sloughed material will not be side-cast; it may be incorporated into the travelway or end-hauled to an area designated by the project administrator.</p>

SWCP	SWCP OBJECTIVE	CONSIDERATIONS FOR IMPLEMENTATION
15.06	MITIGATION OF SURFACE EROSION AND STABILIZATION OF SLOPES - To minimize soil erosion from road cut slopes, fill slopes, and travel ways.	Proposed OHV and dual designated routes may require heavy maintenance or reconstruction to: <ul style="list-style-type: none"> <li>• Narrow tread width</li> <li>• Install drainage at appropriate intervals</li> <li>• Elevate tread over sensitive spring/riparian resources</li> <li>• Improve trail bed with gravel in sensitive areas</li> </ul>
15.07	CONTROL OF PERMANENT ROAD DRAINAGE - To minimize the erosive effects of concentrated water and the degradation of water quality by proper design and construction of road drainage systems and drainage control structures.	No more than 200 feet of ditch will lead into perennial or intermittent stream channels.
15.09	TIMELY EROSION CONTROL MEASURES ON INCOMPLETE ROADS AND STREAM CROSSING PROJECTS - To minimize erosion of and sedimentation from disturbed ground on incomplete projects.	<i>The SWCP states that temporary erosion control and other protective measures will be kept current on all disturbed areas. Areas must not be abandoned for the winter with remedial measures incomplete.</i>
15.10	CONTROL OF ROAD CONSTRUCTION, EXCAVATION, AND SIDE-CAST MATERIAL - To reduce sedimentation from unconsolidated excavated and side-cast material caused by road construction, reconstruction, or maintenance.	Protective measures must be applied to all disturbed, erosion-prone areas.
15.12	CONTROL OF CONSTRUCTION IN RIPARIAN AREAS - To minimize the adverse effects on riparian areas from roads. <b>Note that this SWCP applies in all areas where heavy equipment is operated.</b>	Except at designated stream crossings, fill materials will not be placed in riparian areas or wetlands.
15.13	CONTROLLING IN-CHANNEL EXCAVATION - To minimize stream channel disturbances and related sediment production.	<i>The SWCP states that during construction of roads and installation of stream crossings, it may be necessary for construction equipment to cross or operate near riparian areas. This will be permitted only at locations designated by the ER or TSA with input from IDT specialists. In-channel excavation should be planned for low flow periods and be accomplished in as short a time period as possible. Materials stockpiled or disposed of should be placed and contained in areas above the probable high water lines. Stream channels impacted by construction activity will be restored to their original plan and profile; stream bed armoring should be replaced to the extent possible.</i>
15.18	DISPOSAL OF RIGHT-OF-WAY AND ROADSIDE DEBRIS - To insure debris generated during road construction is kept out of streams and prevent slash and debris from subsequently obstructing channels.	Debris will not be placed in the stream channel or floodplain; incidental debris from tree felling will be removed. Streamside willows may be removed in clumps, set aside, and replaced during cleanup/shaping of the disturbed area. Other debris will be disposed of in adjacent upland areas. Disposal method will be specified by the ER or TSA or the agency project administrator.
15.19	STREAM BANK PROTECTION - To minimize sediment production from stream banks and structural abutments in natural waterways.	Applies to stream crossings and areas where roads are adjacent and/or parallel to the stream channel. Stabilize using riprap and/or other materials as necessary to prevent stream bank and bed erosion.
15.21	MAINTENANCE OF ROADS - To maintain all roads in a manner which provides for soil and water protection by minimizing rutting, failures, side-cast, and blocking of drainage facilities.	See rutting standards Road maintenance associated with a timber sale is the responsibility of purchaser. The ER/SA will ensure the purchaser maintains roads according to the appropriate maintenance level.
15.22	ROAD SURFACE TREATMENT TO PREVENT LOSS OF MATERIALS - To minimize the erosion of road surface materials and, consequently, reduce the likelihood of sediment production.	Selected road segments will be graveled and/or treated with some type of dust abatement material. Additional measures may be required if activities occur or continue outside the normal operating season.

## Appendix G. Implementation and Monitoring

### Implementation

The primary purpose of the Proposed Action is to provide a sustainable and manageable system of non-motorized trails, while protecting resource values and addressing social conflicts. Achieving this objective primarily involves deciding which, of the currently existing trails should remain on the system, which new proposed trails should be added to the system and what designation changes should be made to the trails.

The designation of the trail system is just the beginning of this process. Implementation tasks that will be required for full implementation of the project and an anticipated timeframe for completion are found in the table below. All implementation tasks and timeframes will depend on available funding for materials and labor.

Task	Anticipated Implementation Timeframe
<b>Update GIS data-</b> New trails will need to be added to the Forest GIS database and closed trails will need to be removed from the Forest GIS database.	Winter 2013
<b>Visitor Use Maps-</b> Visitor Use Maps will need to be updated	Winter 2013
<b>Signing of New Use Designations-</b> New use trail use designations will need to be signed showing allowable trail uses	Fall 2013 and Summer 2014
<b>Construction-</b> New designated trails will need to be constructed	Implementation could vary widely depending on amount of new trails designated, amount of future trail program funding, and the level of volunteer participation we receive. Construction would start late summer 2013 and could take several years to complete.
<b>Trail Reroute-</b> Several trails could be rerouted depending on the outcome of the decision.	Work started in Summer of 2014
<b>Signing of New Trails-</b> New Trails will need to be signed after being constructed	Signs will be ordered Summer of 2013 and installed Summer 2014
<b>Education -</b> Education will be emphasized after the decision and will occur through routine patrolling, visitor contacts, brochures, kiosk information	Already started and will be ongoing

and maps.	
<b>Enforcement</b>	Increased patrols will occur a starting in the Summer of 2014.

### Monitoring

The general objective of monitoring is to determine if land management activities are being implemented correctly and if the implementation requirements are effective. This is accomplished through project supervision or implementation monitoring and post-project monitoring.

Post project monitoring is defined in the Forest Plan (USDA Forest Service 1986 as amended).

Monitoring outlined in the Forest Plan that is specifically relevant to this project is included in the following table.

Activity	Monitoring Technique	Reliability	Measurement Frequency	Variation that would cause change in management direction
Trail Condition	Trail Condition Surveys (TRACs)	Monitoring techniques are expected to contain sufficient accuracy and confidence from which to make reliable decisions	5% sample annually of forest trails	Departure from Regional Acceptable work standards
MIS Population Trends- Deer and Elk	Aerial recon, browse and pellet transects, herd composition	Medium	Annual	20% change
MIS Population Trends- Deer and Elk	Trend studies	High	Every 5 years	10% change
Changes in riparian areas dues to land management	Sequential photo points and site analysis	High/Medium	3-5 years	Not meeting Forest Riparian Mgt. Standards

